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# THE MEASUREMENT AND PREDICTION OF TEACHING EFFICIENCY: A SUMMARY OF INVESTIGATIONS

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# The Measurement and Prediction of Teaching Efficiency: A Summary of Investigations

By

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June, 1948

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Prepared Under the Auspices of

The National Society of College Teachers of Education

# PREFACE

The summary of researches here presented was undertaken at the suggestion of the Executive Committee of the National Society of College Teachers of Education. The subject is one in which the author has been interested for many years. It seemed that a summary of progress to date might be of assistance to all concerned.

The summary has been prepared primarily for the mature reader, those directing research, or those engaged in research in this area. Many possible and interesting elaborations have been left for another time and place.

The writer is indebted to many persons for encouragement and assistance,—first of all to Dr. W. E. Peik, Dean of the College of Education, University of Minnesota, President of the Society of Teachers of Education when the project was authorized, and to Dr. Clifford Woody, Professor of Education, University of Michigan, Secretary-Treasurer of the Society.

The abstracting of the several researches was accomplished through the assistance of Jacob Bach, Anthony Schwartz, Donald Hanson, Lewis Wainright, Arnold Lein, Arden Eichstedt, Frank Martindale, and John Best, all teaching and research assistants, University of Wisconsin. The accuracy of the several abstracts was checked by my seminar, Education 282: Factors in Teaching Success, summer quarter, University of Colorado, 1948. Without the assistance of these persons the project would not have been feasible. Their help is greatly appreciated and here recognized.

Valuable assistance was provided by the Advisory Committee appointed by the Executive Committee of the National Society of College Teachers of Education in reading and advising in the preparation of this manuscript. The Advisory Committee was composed of Clifford P. Archer, Director of Placement, School of Education, University of Minnesota; M. J. Nelson, Dean of the Faculty, Iowa State Teachers College; Louis E. Raths, Professor of Education, New York University; and William Reitz, Professor of Education, Wayne University. The manuscript was also read in its entirety by my colleague, Theodore Harris, who offered many valuable suggestions.

Through the courtesy of Dr. Oscar Buros, the galley proof of the forthcoming Mental Yearbook was made available to the author for use in connection with a number of the data-gathering devices herein reported upon. This assistance was greatly appreciated.

The writer assumed responsibility for the digest of the several abstracts and the preparation of the manuscript. Suggestions are welcomed for further research in this area.

A. S. BARR

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# THE MEASUREMENT AND PREDICTION OF TEACHING EFFICIENCY: A SUMMARY OF INVESTIGATIONS

## The Scope of the Monograph

The purposes of this monograph are threefold: 1) to ascertain, as far as one is able to do so from a survey of researches relating to the measurement and prediction of teaching efficiency, the competencies, qualities and behavior controls essential to success in teaching; 2) to appraise current practice as it relates to the identification of the prerequisites to teaching success, and more particularly as it relates to the validity and reliability of the instruments commonly employed in the evaluation and prediction of teaching efficiency; and 3) to estimate current and past success in predicting teaching efficiency when predictions are made at different points in the training program, for different purposes, and by persons with varying philosophies of measurement and education. It is believed that taking stock of the current situation may assist in revealing facts and materials upon which there is agreement and in pointing the way to further activity in this area.

There never has been a time when there has been greater interest in teaching personnel problems. Large numbers of teachers have left the profession and little is known about the comparative teaching effectiveness of those who remain and those who leave. Shortage of supply of new teaching personnel has awakened interest in recruitment of candidates for teacher education. Interest in improvement of the profession demands that this recruitment be on a selective basis. Yet teaching potential is difficult to determine without more knowledge of the factors which make up teaching success. Shortage of teacher supply and high costs of living has brought marked increases in teacher salaries. Laymen who are taxed to pay increased salaries are demanding that increased expenditures bring increased returns in the form of greater teaching effectiveness. Invariably salary schedules and promotions of personnel are based on some estimation of teaching merit. In addition, members of the teaching profession, have observed that the esteem in which other professions are held by society as a whole is determined by the quality of service rendered and by standards of admission to the professional group. Interest in improvement of the teacher education curriculum has led to follow-up studies as a basis for evaluation of curriculum practices. Criteria for evaluation of curriculum practices are held up by inadequate measures of teaching success.

In all of these activities we make certain assumptions about what constitutes a good teacher in general and in the specific situations into which they go. We also make many directly expressed and more frequently not explicitly stated predictions about what will happen or accrue from different courses of action. Sometimes the accuracy of these predictions is checked and sometimes not. Throughout we are gathering, recording, and analyzing data by methods that may or may not be valid. A survey of a large group of studies such as those to be here considered should throw light upon the problems of measuring and predicting teaching efficiency and suggest how to proceed with more confidence in attempting to solve these problems.

## The Plan of This Summary

Since the turn of the century, some one hundred and fifty studies relating to the measurement and prediction of teaching efficiency have been reported in the literature of education. The thought back of the summary here presented is that an analysis of researches in this area should reveal valuable cues and solutions to some problems of concern to the profession today, and problems that are likely to prevail for some time: a) What is a good teacher? b) How can teaching efficiency and its prerequisites be defined so as to be meaningful to all concerned? c) Can future teaching performance be predicted

both in general and for particular individuals, working in specific situations, and for different courses of action,—such as those arising from personal advice, course work, and extra curricular experience? Can it be said that certain types of individuals pursuing certain courses of action are more likely to succeed in certain types of situations than others pursuing other courses of action and operating in other types of situations? A very large number of persons have been concerned with these sorts of problems. The thought back of this report is that a careful study of the many investigations in this area should throw light upon many of the important problems of teacher personnel.

In choosing the studies for this summary, research has been broadly interpreted to include any and all factual investigations of a more systematic sort. The studies are all alike in that they represent new appeals to experience and not mere summaries of what others have done, of what should be done, or of what was done without evaluation. While there is much unevenness in the quality of research represented in these many studies it seems that they all constitute important sources of expert effort, if not established fact. Most of the persons reporting upon researches in this area have thought about the problems associated with teacher personnel for some time; they represent for the most part a very select group of persons from the point of view of training, experience, and capacity; and they have been advised by a very large group of mature scholars, representing many different backgrounds of experience, geographic localities, and institutions. The researches of these persons should constitute a valuable source of ideas about what constitutes efficiency, how to identify it, and how to plan for it with greater certainty.

It is not easy to bring together in a meaningful whole so diverse a collection of studies as those relating to the measurement and prediction of teaching efficiency. It has been particularly hard to know how to array the data to make them helpful to those interested in teacher personnel problems. The final decision was to present the basic data in tabular form, reporting for each study: 1) authorship; 2) the criterion of efficiency; 3) the number of cases studied; 4) the aspects of teachers and teaching studied; 5) the data-gathering devices employed; and 6) major findings. In reporting the findings, an attempt has been made to be objective and to make the report reasonably complete. As far as possible, essential data as well as the more important generalizations have been reported. Where verbal symbols have been used they are those of the original authors and not those of the author of this report. While there are grave dangers of distortion in such summaries, the author has attempted to exercise more than ordinary care in bringing these facts together.

The studies have been grouped into six categories according to the criterion of efficiency employed in each investigation, namely, 1) studies employing practice teaching marks or ratings as the criterion; 2) studies relying upon in-service ratings; 3) studies employing college grades or scholarship as the criterion; 4) studies employing measures of pupil growth and achievement as a major criterion of success; 5) studies employing a concensus of opinion; and 6) a group of studies more or less descriptive in character, classified as miscellaneous.

In preparing the summary the facts were first copied on 5 x 8 cards, each tied to a specific reference. The data were then brought together into a three-way classification based upon convention in this area. There seems to be three very common ways of talking about teaching efficiency (as reported upon in these investigations), namely: 1) in terms of character and personality traits: qualities of the person; 2) in terms of desired competencies, performances, ability to do; and 3) in terms of behavior controls: knowledges, generalized skills, attitudes, interests and ideals. Until more progress has been made in resolving the philosophical and scientific conflicts inherent in these several ways of talking about teaching, it seemed best not to attempt a single dimensional classification.

Besides these lists of qualities, competencies and behavior controls that characterize the good teacher, it was thought that it might be helpful to present a reasonably complete list of the various data-gathering devices employed in identifying teaching efficiency and its prerequisites. Besides the name and publication facts about each measure, data are presented on its validity and reliability insofar as such data are available. Finally, an attempt has been made to appraise present status as it relates to measurement and prediction of teaching efficiency.

### Some Assumptions

Attention will be called here to only a few of the more general assumptions made in the preparation of this report. Reference has already been made to the fact that it was believed that a summary of researches in this area should prove profitable to all concerned. Probably more important is the definition of teaching assumed by the investigators whose work is here summarized. Almost without exception the teachers reported upon in these investigations have been thought of primarily as directors of learning, and as operators in the classroom, rather than as organizers and administrators of school and community resources, as some think the teacher should be.

It is reasonably obvious, too, that the writer talks, in what is to follow, about both teachers and teaching. When we discuss teachers in action we discuss teaching; when we talk about teachers at rest, we talk about teachers. Teaching is broadly conceived to include total behavior on a very wide front. Not only have our conceptions of teaching been limited in that we conventionally restrict our thinking to the teacher's responsibilities as a director of learning, but also in that we appear to single out only certain limited types of behavior for concern, such as directing discussion, planning learning experiences, and appraising pupil growth. There are other types of both covert and overt forms of behavior with which we should be more concerned than we now seem to be. The writer has attempted to keep in mind this broader view of teachers and teaching.

Certain assumptions are made relative to the nature of efficiency. Many of the studies here reported upon attempt to estimate the teacher's efficiency from studies of her behavior, activities or performance. This is frequently done through the application of criteria of some sort. Sometimes these criteria are stated as principles of learning, teaching, and human relationships; sometimes they are expressed in terms of activities thought to characterize the good teacher; occasionally they are stated in such a manner as to include purposes and limiting aspects of the situation as well as principles of action and behavior patterns. Each of these ways of stating criteria has its advantages and disadvantages. It is probably erroneous to assume that specific acts are good or bad divorced from purposes, principles, persons, and situations; this generalization may or may not apply to broad patterns of behavior. It is probably equally erroneous to assume that the implication of principles of learning, teaching, and human relationships are readily discernible. Translating theory into practice is a tremendously difficult matter and one not too well accomplished by the profession. That desirable pupil change will follow in the situations under investigation from types of teacher behavior thought desirable, is frequently assumed rather than tested through measured pupil growth.

Efficiency is defined in some of the studies in terms of qualities of the person. It is presumably assumed that there is some considerable consistency in the teachers' behavior as it relates to teaching. While there is some reason to doubt this assumption as applied to the sum total of human activity, it may, however, apply to a more restricted range of activities, such as those that go to make up teaching or at least it may apply with sufficient accuracy to make its use desirable. In looking at various trait names, it would seem that some characterize the individual per se as a whole, and some characterize his overall behavior. Others are atomistic.

Efficiency is sometimes defined in terms of the common controls over behavior, such as specific knowledges, generalized skills, interests, attitudes, and ideals. These background controls are without doubt important, but their significance for teacher education is not always clear; our methods of identifying them are inadequate, and their relationship to efficiency none too well established. We doubtless make many unfounded assumptions in this area of teacher education and management.

A growing number of persons have attempted to define teacher efficiency in terms of pupil growth and achievement. If this is done, pupil growth and achievement must be broadly viewed to include all around pupil growth, the so-called intangibles as well as the tangibles, and remote outcomes as well as immediate effects. Then, too, while all of the teacher's activities as directors of learning, as friends and counselors of pupils, as professional workers, and citizens will ultimately have important implications for pupil growth and achievement, some persons may wish to appraise the teacher in these separate roles as well as in terms of overall pupil growth

and achievement. When the teacher's influence upon pupil growth and achievement is under investigation, due consideration must also be given to factors other than teaching upon pupil change.

Probably attention should also be called to certain assumptions that have been made about the specifics of teaching and communality. While the teachers studied in the several investigations here summarized are drawn from different subject areas, grade levels, and localities, there seems to be the implied assumption, made in many of these studies, that a teacher is good or bad regardless of the varying situations into which she may be placed. This assumption doubtless constitutes in itself a fruitful field for further investigation. The unique features of specific learning and teaching situations doubtless need far more attention than they have had to date.

In a certain very real sense, what follows is a manipulation of vocabulary and statistical symbols. It is obviously assumed that there is enough commonness of meaning attached to these several symbols to make their manipulation a worthwhile activity; but it is not assumed that one is dealing with precisely defined concepts. We are here treating approximate truths in a stock-taking activity which we hope may reveal ideas and materials that may be profitably used in further study and action, at least until more exact ones can be substituted for them.

## Teaching Efficiency and Its Prerequisites

A summary of the data relative to the characteristics of and prerequisites to teaching efficiency are presented in Table I. Preparatory to making this summary the studies were classified into six groups according to the criterion of teaching efficiency employed in each (Table VI). Each study was read and an abstract prepared. While there are many difficulties involved in preparing such summaries, every effort has been made not to distort the data in taking them out of context. To enable the reader to more adequately evaluate the findings, samples of the data are presented wherever possible, as well as excerpts from summary statements.

In preparing Table I, the relationship between each aspect of teaching investigated and the criterion was carefully studied to discover the nature of the relationship found. The results were classified as positive, negative, or zero. These are very broad categories, but it seemed best not to attempt finer distinction until the data are much more reliable than most that are now available. *Correlations, either positive or negative, not differing from zero by amounts found to be statistically significant, were classified as zero.*

The categories (aspects of teaching) with reference to which the data were summarized, were chosen with some care. An effort was made to choose these categories from the data rather than impose them from without. This is not easy since most of us have so many preconceived ideas about teaching. To begin with, the original author's own words were preserved as far as possible in each abstract. The categories are generally stated in terms of the vocabulary most frequently used in these studies to characterize the different aspects of teaching. To keep the meaning as clear as possible the categories were further defined by listing the vocabulary found in the original reports with reference to each with a citation of the source from which the data are secured for further varification. Categorizing of the personal prerequisites to teaching efficiency was particularly difficult because of the wide variety of vocabulary used in this area. Charters[1] secured the help of a number of experts in condensing the list of some eighty-three terms which he found in his study to be used in characterizing teaching. He condensed this longer list to a list of twenty-five traits. A list of these traits and those found by Barr and Emans in an analysis of 209 teacher rating scales are reproduced in Table IV. The original list of traits and activities found by Barr and Emans is reproduced in Table III; a condensation of this list is given in Table II. These condensations represents an excellent beginning, but they are still much too long for practical use in teacher education and records system. Many persons in other fields have attempted similar condensations. In this connection, the writer has been influenced more by Cattell's[2] grouping of personality traits than by anyone else, except, possibly, by Charters'

[1] W. W. Charters, and D. Waples, *The Commonwealth Teacher Training Study* (Chicago: University of Chicago Press, 1929).

[2] Raymond B. Cattell, *The Description and Measurement of Personality* (Yonkers: World Book Co., 1946).

TABLE I

DIGEST SUMMARY

Frequency of Mention Grouped According to Criteria

| Aspects of Teachers or Teaching Studied | Student teaching rating | | | In service ratings | | | College grades | | | Pupil growth | | | Concensus of opinion | | | Misc. | | | Totals | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | N | Z* | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z |
| | (1) | | | (2) | | | (3) | | | (4) | | | (5) | | | (6) | | | (7) | | |
| I Personal Qualities | | | | | | | | | | | | | | | | | | | | | |
| 1. Teaching Aptitude:** (36, 57, 96, 97, 102, 103) | 5 | 0 | 4 | 2 | 1 | 7 | 1 | 0 | 0 | 2 | 1 | 3 | 2 | 0 | 0 | 4 | 0 | 0 | 16 | 2 | 14 |
| 2. Resourcefulness:** Originality, creativeness, initiative, versatility, imagination, adventurousness, progressiveness (2, 8, 20, 26, 28, 81, 98, 131)*** | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 2 |
| 3. Intelligence:** Foresight, judgment, intellectual acuity, insight, understanding, mental ability, intellectual capacity, common sense (2, 8, 9, 13, 15, 16, 20, 20a, 24, 26, 29, 38, 40, 41, 56, 61, 62, 63, 65, 66, 70, 73, 74, 81, 84, 89, 91a, 91b, 91c, 96, 97, 101, 102, 103, 107, 115, 123, 128, 131, 133) | 6 | 1 | 2 | 16 | 0 | 10 | 3 | 0 | 0 | 5 | 0 | 4 | 9 | 0 | 0 | 5 | 0 | 0 | 44 | 1 | 16 |
| 4. Emotional Stability:** Poise, self-control, steadfastness, sobriety, reserve, dignity, non-neuroticism, emotional maturity, adjustment, constancy, loyalty, easy goingness, realism in facing life, not excitable, stable integrated character (2, 8, 11, 12, 14, 19, 20, 21, 22, 24, 25, 26, 28, 40, 44, 45, 52, 61, 62, 79, 81, 91, 91a, 94, 96, 97, 101, 102, 103, 110, 132) | 8 | 0 | 4 | 12 | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 5 | 3 | 0 | 0 | 8 | 0 | 0 | 33 | 0 | 13 |
| 5. Considerateness:** Appreciativeness, kindliness, friendliness, courteousness, sympathy, tact, good naturedness, helpfulness, patience, politeness, thoughtfulness, tolerance (1, 2, 7, 8, 12, 19, 20, 21, 22, 23, 24, 25, 26, 40, 42, 49, 62, 66, 70, 74, 81, 84, 110, 111, 112, 115, 131) | 63 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 21 | 0 | 0 | 7 | 0 | 0 | 38 | 0 | 3 |
| 6. Bouyancy** Optimism, enthusiasm, cheerfulness, gregariousness, fluency, talkativeness, sense of humor, pleasantness, carefreeness, vivaciousness, alertness, animation, idealism, articulativeness, expressiveness, wittiness (1, 2, 7, 8, 12, 19, 20, 21, 22, 24, 26, 33, 40, 44, 47, 49, 62, 67, 70, 79, 81, 111, 119, 131) | 2 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 27 | 0 | 0 | 1 | 0 | 0 | 42 | 0 | 1 |
| 7. Objectivity:** Fairness, unpartiality, openmindedness, freedom from prejudice, sense of evidence (1, 2, 8, 12, 19, 20, 21, 22, 23, 24, 25, 26, 40, 47, 49, 62, 67, 84, 122, 124) | 4 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 16 | 0 | 0 | 2 | 0 | 0 | 26 | 0 | 1 |
| 8. Drive:** Physical vigor, energy, perseverance, ambition, industry, endurance, motivation, purposefulness, speedyness, zealousness, quickness (8, 20, 23, 26, 40, 70, 74, 81, 98, 115, 131) | 3 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 3 | 0 | 0 | 19 | 0 | 0 |
| 9. Dominance:** Self-confidence, forcefulness, decisiveness, courageousness, independence, insensitiveness to social approval, self sufficiency, determination, thick skinnedness, self reliance, self assertiveness (2, 8, 9, 19, 22, 26, 44, 45, 62, 70, 71, 79, 81, 84, 91a, 96, 97, 102, 103, 110, 119) | 5 | 0 | 3 | 5 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 2 | 6 | 0 | 0 | 5 | 0 | 0 | 24 | 0 | 9 |

*P indicates positive findings; N, negative; and Z, zero relationship.

**The numbers immediately following indicate the frequency with which each sort of finding occurred in the research analyzed.

***These numbers refer to the bibliography at the end of this report; the number of entries here will not add up to the total frequency in the row of figures above since each study may employ more than one criterion.

TABLE I—Continued

Frequency of Mention Grouped According to Criteria

| Aspects of Teachers or Teaching Studied | Student teaching rating | | | In service ratings | | | College grades | | | Pupil growth | | | Concensus of opinion | | | Misc. | | | Totals | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z |
| | (1) | | | (2) | | | (3) | | | (4) | | | (5) | | | (6) | | | (7) | | |
| 10. Attractiveness: | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 3 | 0 | 0 | 27 | 0 | 0 |
| Dress, physique, freedom from physical defects, personal magnetism, neatness, cleanliness, posture, personal charm, appearance (8, 12, 15, 19, 20, 21, 22, 24, 26, 28, 39, 40, 47, 49, 67, 70, 79, 81, 98, 110, 115, 124, 133, 134) | | | | | | | | | | | | | | | | | | | | | |
| 11. Refinement: | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 8 | 0 | 0 |
| Good taste, modesty, morality, conventionality, culture, polish, well readness (8, 26, 40, 44, 74, 81, 110, 111) | | | | | | | | | | | | | | | | | | | | | |
| 12. Cooperativeness: | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 4 | 0 | 0 | 13 | 0 | 0 |
| Friendliness, easy goingness, geniality, generousness, adaptability, flexibility, responsiveness, trustfulness, warm heartedness, unselfishness, charitableness (2, 8, 20, 26, 62, 74, 81, 87, 111, 134) | | | | | | | | | | | | | | | | | | | | | |
| 13. Reliability: | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 5 | 0 | 0 | 28 | 0 | 0 |
| Accuracy, dependability, honesty, punctuality, responsibility, conscientiousness, painstakingness, trustworthiness, consistency, sincerity (2, 8, 24, 26, 40, 47, 67, 81, 110, 115, 119) | | | | | | | | | | | | | | | | | | | | | |
| 14. Personality, General | 2 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 1 | 9 | 0 | 1 | 9 | 0 | 0 | 5 | 0 | 0 | 34 | 0 | 2 |
| (9, 15, 21, 24, 38, 47, 60, 67, 73, 74, 81, 85, 89, 96, 97, 98, 108, 110, 131) | | | | | | | | | | | | | | | | | | | | | |
| II Competencies (abilities to do) | | | | | | | | | | | | | | | | | | | | | |
| A. As a Director of learning | | | | | | | | | | | | | | | | | | | | | |
| 1. Skill in identifying pupil needs: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. Skill in setting and defining goals: (8, 81) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 3. Skill in creating favorable mind sets (motivation): (7, 8, 21, 23, 24, 42, 49, 81, 124) | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 12 | 0 | 0 |
| 4. Skill in choosing learning experiences: (81, 129) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 5. Skill in following the learning process | | | | | | | | | | | | | | | | | | | | | |
| a. In providing for individual differences: (7, 8, 81, 122, 124, 129, 134) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 0 |
| b. In making activities meaningful: (7, 59) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |



TABLE I—Continued

TABLE 1—Continued

Frequency of Mention Grouped According to Criteria

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c. In locating and overcoming difficulties: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| d. In organizing experiences into meanful wholes: (7, 8, 24, 40, 67, 81, 124) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | |
| e. In supervising study: (7, 8, 81, 124) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | |
| f. In directing discussion: (7, 8, 81, 129) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 0 | |
| 6. Skill in using learning aids: (42, 81, 129) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | |
| 7. Skill in teacher–pupil relations: | 3 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 38 | 0 | 0 | |
| 8. Skill in appraising pupil growth and achievement: (81) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 9. Skill in management: (8, 20, 40, 81, 124, 129) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | |
| 10. Skill in instruction (general): (8, 9, 19, 20, 22, 24, 28, 47, 60, 67, 68, 74, 81, 87, 97, 98, 108, 124, 129, 134) | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 14 | 0 | 1 | 9 | 0 | 0 | 4 | 0 | 0 | 34 | 0 | 1 | |
| B. As counselor and friend of pupils: (25) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | |
| C. As member of a profession: (81) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| D. As member of a community: (81) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| III Effects of teacher leadership (Results): (8, 20, 28, 31, 65, 74, 109, 124) | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 14 | 0 | 0 | |
| IV Behavior Controls | | | | | | | | | | | | | | | | | | | | | | |
| A. Knowledges | | | | | | | | | | | | | | | | | | | | | | |
| 1. Knowledge of the subject matter taught or activity directed: (7, 9, 12, 23, 24, 25, 29, 34, 38, 40, 41, 47, 49, 65, 67, 74, 81, 86, 87, 89, 96, 97, 101, 103, 108, 124, 130, 134) | 1 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | 2 | 10 | 0 | 0 | 3 | 0 | 1 | 27 | 0 | 3 | |
| 2. Knowledge of child behavior and development: (81, 95) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | |
| 3. Knowledge of professional practices and techniques: (8, 9, 16, 17a, 22a, 39, 41, 55, 56, 61, 62, 63, 65, 66, 73, 74, 81, 83, 85, 89, 97, 99, 112, 126, 127, 128, 133) | 8 | 0 | 0 | 20 | 0 | 3 | 2 | 0 | 0 | 8 | 0 | 2 | 3 | 0 | 0 | 5 | 0 | 0 | 46 | 0 | 5 | |
| 4. General cultural background: (15, 24, 39, 40, 41, 52, 56, 61, 65, 73, 74, 81, 96, 101, 103, 107, 108) | 0 | 0 | 2 | 3 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 1 | 6 | 0 | 0 | 3 | 0 | 0 | 14 | 0 | 7 | |
| 5. Scholarship, grade point average: (8, 15, 17a, 20a, 21, 22a, 26, 39, 56, 61, 63, 65, 73, 77, 81, 83, 84, 85, 89, 90, 91a, 115, 117, 125, 128, 133, 134) | 7 | 0 | 3 | 27 | 1 | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 55 | 1 | 3 | |

TABLE I—Continued

Frequency of Mention Grouped According to Criteria

| Aspects of Teachers or Teaching Studied | Student teaching rating | | | In service ratings | | | College grades | | | Pupil growth | | | Concensus of opinion | | | Misc. | | | Totals | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z | P | N | Z |
| | (1) | | | (2) | | | (3) | | | (4) | | | (5) | | | (6) | | | (7) | | |
| B. Generalized skills | | | | | | | | | | | | | | | | | | | | | |
| 1. Skill in problem solving: (81) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2. Work habits: | 1 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 1 |
| 3. Skill in human relationships (See teacher–pupil relationships): | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Skill in the use of language | | | | | | | | | | | | | | | | | | | | | |
| a. Speech: (12, 15, 20, 23, 24, 25, 40, 49, 53, 70, 75, 79, 81, 134) | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 16 | 0 | 0 | 4 | 0 | 0 | 27 | 0 | 0 |
| b. Reading: (8, 41, 56, 61, 73, 81) | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 3 |
| c. English usage: (8, 73) | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 3 | 0 | 0 | 8 | 0 | 1 |
| C. Interests, attitudes and ideals | | | | | | | | | | | | | | | | | | | | | |
| 1. Interest in pupils: (2, 24, 40, 49) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 |
| 2. Interest in subject or activity: (9) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 3. Interest in teaching and school work: (8, 20, 21, 39, 40, 52, 69, 73, 74, 83, 91a, 96, 97, 103, 130, 136) | 0 | 0 | 2 | 5 | 0 | 2 | 0 | 0 | 0 | 6 | 0 | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 20 | 0 | 5 |
| 4. Interest in community: (20, 21, 108, 124) | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 |
| 5. Social attitudes: (96, 102, 103, 130) | 2 | 2 | 2 | 2 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 11 | 2 | 6 |
| 6. Professional attitudes: (15, 39, 66, 74, 124, 166) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 |
| 7. Efforts toward self-improvement: (8, 63, 129) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| 8. Interests (general): (8, 40, 70, 81) | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 0 |
| 9. Interest in extra-curricular activities: (40, 60, 70, 81, 104, 115, 124) | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 |
| D. Health: (8, 15, 20, 26, 40, 74, 81, 84, 98, 119, 124) | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 12 | 0 | 2 |
| E. Morale: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE I—Continued

| | Frequency of Mention Grouped According to Criteria | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V Status facts | | | | | | | | | | | | | | | | | | | | | |
| 1. Age: (16, 21, 63, 74, 89, 96, 115) | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 2 | 2 |
| 2. Height: (89) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 3. Weight: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Training: (58, 88, 96, 137) | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 |
| 5. Experience: (16, 20, 27, 34, 55, 61, 63, 88, 89, 96) | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 8 | 0 | 5 |
| 6. Sex: (27, 54, 62, 102, 103) | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 7. Salary: (34, 63, 85, 96) | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| 8. Recommendations: (48, 52, 123) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| 9. Photographs: (123) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 10. Socio-economic status: (91a, 96) | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| 11. Tenure (in present position): (21, 34) | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 12. Applications: (52, 123) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

TABLE II

A SUMMARY OF 209 SCALES FOR THE RATING OF TEACHERS*

| | Frequency |
|---|---|
| I. Classroom Management (general) (2, 107, 116, 168)** | 205 |
| 1. Attention to physical conditions | x |
| (a) heat (45, 167, 171) | 48 |
| (b) light (68, 160, 175) | 49 |
| (c) ventilation (42, 145, 150) | 58 |
| 2. Housekeeping and appearance of room (7, 97, 119, 148, 152) | 173 |
| 3. Discipline (6, 137, 138, 179, 184, 188) | 160 |
| 4. Economy of time (150) | 34 |
| 5. Records and reports (43, 70) | 67 |
| 6. Attention to routine matters (31, 162, 183, 197) | 72 |
| II. Instructional Skill (general) (1, 47, 89, 118, 133, 143, 157, 198) | 371 |
| 1. Selection and organization of subject matter (4, 87, 165) | 177 |
| 2. Definiteness of aim (15, 109, 161) | 110 |
| 3. Skill in assignment (14, 127, 128, 174) | 118 |
| 4. Attention to individual needs (26, 182) | 70 |
| 5. Skill in motivating work (27, 131) | 78 |
| 6. Skill in questioning (25, 194) | 72 |
| 7. Skill in directing study (30, 199) | 65 |
| 8. Skill in stimulating thought (49) | 35 |
| 9. Daily preparation (lesson planning) (21, 52, 154, 192) | 116 |
| 10. Skill in presenting subject matter (60, 87) | 54 |
| 11. Pupil interest and attention (91) | 22 |
| 12. Pupil participation (56, 176) | 38 |
| 13. Attitude of pupils (75, 76, 181) | 56 |
| 14. Results (in one form or another) (22, 29, 41, 51, 83, 111, 126, 140, 147, 153, 159, 166, 191) | 305 |
| III. Personal Fitness for Teaching (general) (5, 18, 33, 88, 117, 125, 129, 142, 149, 189) | 369 |
| 1. Accuracy (carefulness, definiteness, thoroughness) (54, 180) | 37 |
| 2. Adaptability (48, 65) | 64 |
| 3. Attitude toward criticism (67) | 28 |
| 4. Considerateness (appreciativeness, courtesy, kindliness, sympathy, tact, unselfishness) (16, 73, 80, 122) | 145 |
| 5. Energy and vitality (53, 135, 144) | 55 |
| 6. Enthusiasm (alertness, animation, inspiration, spontaneity) (23) | 67 |
| 7. Fairness (sense of justice) (77, 82) | 49 |
| 8. Forcefulness (courage, decisiveness, firmness, independence, purposefulness) (186) | 5 |
| 9. Good judgment (discretion, foresight, insight, intelligence) (63) | 30 |
| 10. Health (10, 187) | 106 |
| 11. Honesty (integrity, dependability, reliability) (59, 120) | 46 |
| 12. Industry (patience, perseverance) (39) | 46 |
| 13. Leadership (initiative, self-confidence, self-reliance) (17, 57, 96) | 131 |
| 14. Loyalty | x |
| 15. Morality (92, 101, 123) | 56 |
| 16. Open mindedness | x |
| 17. Optimism (cheerfulness, pleasantness, sense of humor, wittiness) (86, 112, 124) | 54 |
| 18. Originality (imaginativeness, resourcefulness) (36, 141) | 58 |
| 19. Personal appearance (8, 64, 84, 85, 106) | 213 |
| 20. Posture (190) | 5 |
| 21. Progressiveness (ambition) (121) | 15 |
| 22. Promptness (dispatch, punctuality) (20, 98, 103) | 112 |
| 23. Refinement (conventionality, good taste, modesty, simplicity) | x |
| 24. Self-control (calmness, dignity, poise, reserve, sobriety) (28, 95) | 83 |
| 25. Skill in expression (13, 169) | 93 |
| 26. Sociability (33) | 52 |
| 27. Thrift | x |
| 28. Understanding of children (90) | 23 |
| 29. Voice (pleasing) (11) | 96 |
| IV. Scholarship and Professional Preparation (24, 35, 38, 40, 100, 110, 130, 134, 155, 158, 163, 173, 193) | 301 |
| V. Effort toward Improvement (32, 62, 139, 195) | 98 |
| VI. Interest in Work, Pupils, Patrons, Subjects Taught, etc. (37, 69, 72, 94, 102, 113, 172, 185) | 172 |
| VII. Ability to Cooperate with Others (9, 55, 58, 74, 93, 132, 146) | 235 |

*A. S. Barr and Lester M. Emans, "What Qualities are Prerequisite to Success in Teaching?" *Nation's Schools*, VI (September, 1930), p. 62.

**The number in parentheses following each quality or trait refer to the original number of the item in Table III. The data are presented in this manner to enable the reader to check the classification proposed. Five thousand three hundred ninety-seven of the 6,083 total frequencies shown in Table III are accounted for in Table II.

TABLE III

TRAITS AND ACTIVITIES OCCURRING WITH A FREQUENCY OF FIVE OR MORE IN 209 RATING SCALES

| Number of item | Item | Frequency |
|---|---|---|
| 1. | Instruction | 261 |
| 2. | Classroom management | 164 |
| 3. | Professional attitude | 157 |
| 4. | Choice of subject matter | 147 |
| 5. | Personal habits | 151 |
| 6. | Discipline | 125 |
| 7. | Appearance of the room | 120 |
| 8. | Personal appearance | 118 |
| 9. | Cooperation | 103 |
| 10. | Health | 101 |
| 11. | Voice | 96 |
| 12. | Professional growth | 94 |
| 13. | Use of English | 87 |
| 14. | Skill in assignment | 86 |
| 15. | Definiteness of aim | 85 |
| 16. | Tact | 79 |
| 17. | Initiative | 78 |
| 18. | Personality | 76 |
| 19. | Loyalty | 74 |
| 20. | Promptness | 71 |
| 21. | Daily preparation | 69 |
| 22. | Results | 68 |
| 23. | Enthusiasm | 67 |
| 24. | Scholarship | 67 |
| 25. | Skill in questioning | 67 |
| 26. | Attention to individual needs | 65 |
| 27. | Motivation | 65 |
| 28. | Self-control | 61 |
| 29. | *General development of pupils | 60 |
| 30. | Skill in teaching how to study | 60 |
| 31. | Routine | 55 |
| 32. | Professional reading | 53 |
| 33. | Social qualities | 52 |
| 34. | Skill in habit formation | 50 |
| 35. | Preparation | 48 |
| 36. | Resourcefulness | 48 |
| 37. | Interest in lives of the pupils | 47 |
| 38. | Professional equipment | 47 |
| 39. | Industry | 46 |
| 40. | Professional preparation | 43 |
| 41. | *Pupil achievement | 41 |
| 42. | Care of ventilation | 40 |
| 43. | Reports | 39 |
| 44. | Attendance | 37 |
| 45. | Care of heat | 36 |
| 46. | Care of light | 36 |
| 47. | Teaching methods (devices) | 36 |
| 48. | Adaptability | 35 |
| 49. | Skill in stimulating thought | 35 |
| 50. | Economy of time | 34 |
| 51. | *Habits | 34 |
| 52. | Lesson planning | 34 |
| 53. | Vitality | 34 |
| 54. | Accuracy | 32 |
| 55. | Cooperation with school | 32 |
| 56. | *Pupil participation | 32 |
| 57. | Self-reliance | 32 |
| 58. | Cooperation with community | 31 |
| 59. | Reliability | 31 |
| 60. | Skill in presentation | 31 |
| 61. | Drill | 30 |
| 62. | Effort to improve | 30 |
| 63. | Judgment | 30 |
| 64. | Appearance | 29 |
| 65. | Teaching ability | 29 |
| 66. | Teaching material | 29 |
| 67. | Attitude toward criticism | 28 |
| 68. | Care of school property | 28 |
| 69. | Professional interest | 28 |
| 70. | Records | 28 |
| 71. | Intellectual capacity | 27 |
| 72. | Interest in life of community | 27 |
| 73. | Sympathy | 27 |
| 74. | Cooperation with other teachers | 26 |
| 75. | *Pupil reaction | 26 |
| 76. | *Pupil-teacher cooperation | 25 |
| 77. | Sense of justice | 25 |
| 78. | Sincerity | 25 |
| 79. | Ability to meet patrons | 24 |
| 80. | Courtesy | 24 |
| 81. | Executive ability | 24 |
| 82. | Fairness | 24 |
| 83. | *Growth of pupils in subject matter | 24 |
| 84. | Neatness | 24 |
| 85. | Dress | 23 |
| 86. | Optimism | 23 |
| 87. | Organization of subject matter | 23 |
| 88. | Personal equipment | 23 |
| 89. | Technique of teaching | 23 |
| 90. | Understanding of children | 23 |
| 91. | *Attention of class | 22 |
| 92. | Character | 22 |
| 93. | Cooperation with supervisory officials | 22 |
| 94. | Interest in work | 22 |
| 95. | Poise | 22 |
| 96. | Leadership | 21 |
| 97. | Neatness of room | 21 |
| 98. | Punctuality | 21 |
| 99. | *Response of class | 21 |
| 100. | Knowledge of subject matter | 20 |
| 101. | Moral influence | 20 |
| 102. | Professional spirit | 20 |
| 103. | Promptness of reports | 20 |
| 104. | Tests (grading) | 20 |
| 105. | *Expression | 19 |
| 106. | General appearance | 19 |
| 107. | School management | 19 |
| 108. | Social service | 19 |
| 109. | Clearness of aim | 18 |
| 110. | Culture | 18 |
| 111. | *Skills | 18 |
| 112. | Cheerfulness | 17 |
| 113. | Interest in life of the school | 17 |
| 114. | Experience | 16 |
| 115. | Extra-curricular activities | 16 |
| 116. | Management | 16 |
| 117. | Manner | 16 |
| 118. | Teaching techniques | 16 |
| 119. | Hygiene conditions | 15 |
| 120. | Integrity | 15 |
| 121. | Progressiveness | 15 |
| 122. | Sympathy with children | 15 |

**Note:** The phraseology used to describe the several traits and qualities of teaching given in this table is identical with that of the rating scales from which the items were taken.

*Pupil traits, qualities or activities.

TABLE III—Continued

| Number of item | Item | Frequency |
|---|---|---|
| 123. | Character building | 14 |
| 124. | Sense of humor | 14 |
| 125. | Social equipment | 14 |
| 126. | *Thinking ability | 14 |
| 127. | Assignment | 13 |
| 128. | Care in assignment | 13 |
| 129. | Disposition | 13 |
| 130. | Grasp of subject matter | 13 |
| 131. | Skill in motivating work | 13 |
| 132. | Team work | 12 |
| 133. | Technique | 12 |
| 134. | Academic preparation | 11 |
| 135. | Energy | 11 |
| 137. | Class discipline | 10 |
| 138. | Control of class | 10 |
| 139. | Growth | 10 |
| 140. | *Ideals | 10 |
| 141. | Originality | 10 |
| 142. | Personal | 10 |
| 143. | Skill in teaching | 10 |
| 144. | Vigor | 10 |
| 145. | Attention to ventilation | 9 |
| 146. | Cooperation with principal | 9 |
| 147. | *Development of effective habits of study | 9 |
| 148. | Housekeeping | 9 |
| 149. | Personal qualifications | 9 |
| 150. | Ventilation | 9 |
| 151. | Ability to interest patrons | 8 |
| 152. | Attractiveness of room | 8 |
| 153. | *Command of subject matter | 8 |
| 154. | Preparation of daily work | 8 |
| 155. | Professional qualities | 8 |
| 156. | Stimulation of community | 8 |
| 157. | Teaching skill | 8 |
| 158. | Training | 8 |
| 159. | *Achievement of pupils | 8 |
| 160. | Attention to light | 7 |
| 161. | Care of room | 7 |
| 162. | Care of routine | 7 |
| 163. | General scholarship | 7 |
| 164. | Room conditions | 7 |
| 165. | Selection of subject matter | 7 |
| 166. | *Achievement of pupils | 6 |
| 167. | Attention to heat | 6 |
| 168. | Class management | 6 |
| 169. | Command of English | 6 |
| 170. | Habit formation | 6 |
| 171. | Heat | 6 |
| 172. | Interest in pupils | 6 |
| 173. | Knowledge of subject | 6 |
| 174. | Lesson assignment | 6 |
| 175. | Light | 6 |
| 176. | *Participation of class | 6 |
| 177. | Professional | 6 |
| 178. | Subject matter | 6 |
| 179. | Ability to discipline | 5 |
| 180. | Accuracy of reports | 5 |
| 181. | *Attitude of class (in doubt) | 5 |
| 182. | Attention to individual differences | 5 |
| 183. | Attention to routine | 5 |
| 184. | Class control | 5 |
| 185. | Community interest | 5 |
| 186. | Conclusiveness | 5 |
| 187. | General health | 5 |
| 188. | Governing skill | 5 |
| 189. | Personal characteristics | 5 |
| 190. | Posture | 5 |
| 191. | *Power of expression | 5 |
| 192. | Preparation of work | 5 |
| 193. | Professional training | 5 |
| 194. | Questions | 5 |
| 195. | Self-improvement | 5 |
| 196. | Skill in drill | 5 |
| 197. | Systematic routine | 5 |
| 198. | Teaching | 5 |
| 199. | Teaching how to study | 5 |
| 200. | Thoroughness of drill | 5 |

TABLE IV

A COMPARISON OF THE CHARTERS RANK LIST OF TEACHERS' TRAITS AND THE BARR-EMANS LIST

| Traits | Average Rank Charters | Barr-Emans Rank |
|---|---|---|
| 1. Adaptability | 6 | 13 |
| 2. Personal appearance (neatness, cleanliness) | 15 | 3 |
| 3. Breadth and intensity of interest (in community, profession, pupils, etc.) | 7 | 4 |
| 4. Carefulness (accuracy, definiteness, thoroughness) | 11 | 18 |
| 5. Considerateness (appreciativeness, courtesy, kindliness, sympathy, tact, unselfishness) | 3 | 5 |
| 6. Cooperation (helpfulness, loyalty) | 9 | 1 |
| 7. Enthusiasm (alertness, animation, inspiration, spontaneity) | 4 | 12 |
| 8. Fluency (skill in expression) | 24 | 9 |
| 9. Forcefulness (courage, decisiveness, firmness, independence, purposefulness) | 11 | 23 |
| 10. Judgment (discretion, foresight, insight, intelligence) | 1 | 20 |
| 11. Health (vigor, energy, vitality) | 14 | 8 |
| 12. Honesty (dependability, consistency) | 8 | 22.5 |
| 13. Industry (patience, perseverance, ambition) | 16 | 17 |
| 14. Leadership (initiative, self-confidence) | 11 | 6 |
| 15. Personal magnetism (attractiveness, pleasantness, cheerfulness, optimism, sense of humor, approachability, sociability, wittiness) | 5 | 2 |
| 16. Open-mindedness (freedom from prejudice, objectivity) | 22 | 24.5 |
| 17. Originality (creative ability, imaginativeness, resourcefulness) | 20 | 14 |
| 18. Progressiveness (willingness to try new means, methods, materials) | 23 | 22.5 |
| 19. Promptness (dispatch, punctuality) | 21 | 7 |
| 20. Refinement (conventionality, good taste, modesty, morality, simplicity) | 10 | 15 |
| 21. Scholarship (knowledge of subject and related subjects, cultural background) | 19 | 10 |
| 22. Self-control (calmness, dignity, poise, reserve, sobriety) | 2 | 11 |
| 23. Thrift | 25 | 24.5 |

already referred to. While no attempt has been made to preserve Cattell's terminology or distinction between surface and foundation traits, an effort has been made to do as little violence as possible to his categories, while still building upon the foundation laid by Charters.

As one studies Table I, certain conclusions seem justified:

1) A great variety of vocabulary is used to characterize teaching efficiency and its prerequisites. At least five wholly different ways of characterizing teaching have been employed, namely, a) in terms of qualities of the person; b) in terms of expected competencies; c) in terms of desired pupil outcomes; d) in terms of behavior controls: knowledges, generalized skills, interests, attitudes, and ideals; and e) in terms of a miscellaneous collection of background personal data. While each approach has its own peculiar strengths and weaknesses, no one seems best for all purposes; they are by and large, however, not at all incompatible, and may for the time being, until better systems have been devised, all be used with profit.

2) Certain aspects of teaching have received very much more attention than others. All in all, some sixty-seven different aspects of teaching, as here categorized have been investigated; over nine hundred different mentions were made of these aspects of teaching in the studies here summarized. This is an average of approximately six aspects of teaching studied per investigation. The personal prerequisites to teaching efficiency, knowledge of subject matter, and professional preparation have received a very large amount of attention. Among the expected competencies, those relating to the teacher as a director of learning have received very much more attention than those relating to the school, community, and professional activities of the teacher. While there is currently much interest in guidance very few of the studies contained data on the activities of the teacher as a friend and counselor of pupils. There are a surprisingly few mentions of resourcefulness, refinement, knowledge of child behavior work habits and interest in subject and pupils. The relatively few mentions of the various competencies may have arisen from the manner in which the studies were chosen for the summary here made. There is continued interest in discipline with a growing concern over other types of teacher-pupil relationships.

3) There is very much more agreement upon some characteristics than others. The results are all positive with only an occasional exception for considerateness, cooperation, bouyancy, reliability, drive, attractiveness, refinement, skill in teacher-pupil relations, instructional skill (general), knowledge of subject matter taught or activity directed, knowledge of professional practices and techniques, skill in speech, and health. The situation, while predominantly positive, is less clear for such items as intelligence, emotional stability, and dominance. Part of the inconsistency may arise from the data-gathering devices used, the sample studied, and the criterion of efficiency.

4) More attention seemed to have been given in the past decade to the validity and reliability of the criterion than in the earlier studies in this field. Many of the earlier studies used supervisory ratings as the chief or sole criterion of efficiency, and frequently these ratings were those of a single supervisor. Many of the recent studies have employed a variety of criteria, used individually and in composites. An increasing number have used pupil growth and achievement as the criterion of teaching efficiency.

5) A very large number of data-gathering devices have been used in the study of teachers and teaching, including tests, rating scales, behavior records, check lists, questionnaires, interviews, and inventories. The relative merit and validity of these instruments are not very well known. A discussion of data-gathering devices will follow in a later section.

As one surveys the several tables (I, II, III, IV) and looks back upon the experience of analyzing the research back of them, certain needs for further research and study in this area seem apparent:

1) There is, in the writer's opinion, a pressing need for less variety in the vocabulary used in this area. Selecting, counseling, and placing students, and managing teachers in service would be greatly facilitated if a common, more precisely defined language might be used. Factor analyses might help in reducing the aspects of teaching that one needs to keep in mind.

2) There is need for a more precise definition of teaching. When one surveys the researches reported here, talks with colleagues, and calls to mind the large amount of non-research descriptive literature appearing in

current publications, there seems to be a change taking place in our conception of the teacher and her responsibilities. While teachers have traditionally been closely tied to the direction of learning and the classroom, there seems to be many new demands upon her, growing out of many extra assignments in the school and the community; in her activities as friend and counselor of pupils; and in her membership in a professional group. The trend, if one observes such, would seem to emphasize broader training and certainly more emphasis upon a broad general education and cultural background; skill in human relationships at all levels with adequate grounding in the controls over behavior as well as action patterns; and exposure to the managerial responsibilities of the modern teacher in her role as an organizer and conserver of human resources.

3) More attention needs to be given to the particulars of teaching. Most of the studies here summarized have concerned themselves with the elements common to many different types of persons and positions, and not with permissible idiocyncracies in teachers and the demands of different situations. Individual differences in persons, assignments, and situations, as well as likenesses have implications for the selection, guidance, education, placement, and management of teachers. These differences need careful study.

4) We need to know more about what happens to teachers over longer periods of time, —the professional hazards, growth and decline in teaching efficiency, and personality changes. Cross sectional studies are not enough; we need more long-time longitudinal studies.

5) We need more information about the professional activities and responsibilities of teachers; we would like better answers to questions such as: Should teachers organize? Should they affiliate with other groups? With whom? Should they strive for professional status and set standards of proficiency? Should there be codes of ethics? Should there be action programs of many sorts? There are many such questions about which teachers desire more and better information.

## Devices Employed in Collecting Data About Teachers and Teaching

There are many different sorts of data-gathering devices employed in studying teachers and teaching. A list of these is presented in Table V. Tests, rating scales, inventories predominate. The full list includes: tests, behavior descriptions, recordings, rating scales, check lists, questionnaires, inventories, and interviews. Besides these, there are many mechanical devices used in measuring aspects of individuals, such as those used to ascertain height, weight, reaction time, metabolism, emotional reactions, and the like. Our concern here is with the validity, reliability, and availability of these various devices for gathering data about teachers and teaching.

The data relative to these measures are summarized in Table V. The list is by no means complete; a long list of unpublished materials has been omitted. The references cited are representative rather than inclusive.

Certain observations seem warranted from a study of the data here presented, and the original studies from which they are taken:

1) A very large number of data-gathering devices are now available for the study of teachers and teaching. There is also considerable spread as to type of devices: rating scales, tests, etc.

2) The reliabilities of these various devices seem to be relatively high; their validities relatively unknown. The evidence is chiefly of a correlational character and must not be accepted at face value. The size of these correlations will vary with the sample used, the spread of talent, and the criterion. The design of most of the studies is such that it is not possible to know whether the low correlations were due to the lack of relationship of the aspects of teaching studied to teaching efficiency, or to a lack of validity and reliability on the part of the data-gathering devices used.

3) The data are many times inconsistent. The inconsistencies are probably more apparent than real. With so many different samples, data-gathering devices, criteria, and purpose, a large amount of consistency should not be expected. Studies made under comparable conditions give reasonably consistent results.

4) The reliability of examiners should be known as well as that of devices. It is not enough to say that the person concerned is a trained observer. The nature of his approach and his reliability must be known.

5) Many persons confuse the terms "measure" (collect data about) and "evaluate". The collection of valid and reliable data is only one step in the much more com-

TABLE V

A SELECTED LISTS OF TESTS, RATING SCALES, AND INVENTORIES EMPLOYED IN COLLECTING DATA ABOUT TEACHERS*

| Title | Reliability | Validity** |
|---|---|---|
| **Abilities to Organize Research Materials** (Revised Form), J. W. Wrightstone. Bureau of Publications, Teachers College, New York. (Cited: 97, 52) | .87 (52) | .58 (97, composite pupil change) |
| **Almy-Sorenson Rating Scale for Teachers**, H. C. Almy and Herbert Sorenson. Public School Publishing Co., Bloomington, Illinois. (Cited: 97, 96, 66, 44, 52, 2, 75) | .92 (52)<br>(9)<br>.92 (A) | .36 (96, composite pupil change)<br>.26 (97, composite pupil change)<br>.36 (44, composite pupil change)<br>.76 (9, composite of 19 measures) |
| **American Council Civics and Government Test**, Form B, Robert D. Leigh and others. World Book Co., Yonkers, New York. (Cited: 97, 96, 130, 44, 52, 80) | .88 (52)<br>.82 (97) | .36 (97, composite pupil change)<br>—.01 (96, composite pupil change) |
| **Aptitude Test for Elementary and High School Teachers**, J. E. Bathurst, F. B. Knight and others. Bureau of Public Personnel administration, Washington, D. C. 1927. (Cited: 9) | | .43 (9, composite of 19 measures) |
| **Barr-Harris Teachers' Performance Record**, A. S. Barr and A. E. Harris. Dembar Publications, Inc., Madison, Wisconsin, 1943. (Cited: 66) | .82 (A) | .76 (66, M-Blank ratings)<br>.28 (66, pupil evaluations)<br>.30 (66, pupil gain) |
| **Bell Adjustment Inventory**, Adult Form, Hugh M. Bell. Stanford University Press, Stanford, Calif., 1938. (Cited: 45, 101, 104, 61, 102, 103, 60) | .95 (A) | —.40 (102, student teaching grades)<br>—.31 (102, in-service ratings)<br>—.04 (61, M-Blank ratings)<br>—.27 (61, pupil gain)<br>—.05 (61, student teaching grades)<br>.52 (61, scholarships)<br>.26 (61, in-service ratings) |
| **Bernreuter Personality Inventory**, R. G. Bernreuter. Stanford University Press, Stanford, Calif. (Cited: 35, 45, 52, 71, 80, 44, 94, 96, 97, 101, 102, 103, 104, 132, 137, 100) | | |
| (Bn) Neurotic tendency | .91 (97) | —.31 (97, composite pupil change) |
| (Bs) Self-sufficiency | .70 (97) | .20 (97, composite pupil change) |
| (Bd) Dominance–submission | .98 (97) | .25 (97, composite pupil change) |
| (Fc) Flanagan self-confidence | .86 (97) | —.27 (97, composite pupil change) |
| (Fs) Flanagan sociability | .78 (97) | —.13 (97, composite pupil change) |
| (Bn) Neurotic tendency | | —.14 (96, composite pupil change)<br>—.14 (44, composite pupil change)<br>.15 (44, composite teacher tests)<br>.16 (44, composite teacher rating)<br>.06 (44, composite three personality scales) |
| (Bs) Self-sufficiency | | —.11 (96, composite pupil change)<br>—.11 (44, composite pupil change)<br>.19 (44, composite teacher tests)<br>.01 (44, composite teacher rating)<br>—.01 (44, composite three personality scales) |
| (Bd) Dominance–submission | | .04 (96, composite pupil change)<br>.04 (44, composite pupil change)<br>.13 (44, composite teacher tests)<br>.19 (44, composite teacher rating)<br>.09 (44, composite three personality scales) |
| **Brown Psychological Examination**, Form E. and F, Andrew H. McPhail. **The Intelligence of College Students.** Warwick and York, Baltimore, Md., 1923. (Cited: 133) | | .15 (133, teaching success) |

*The list here given is by no means complete; only the most frequently used and available measures for which the data are most complete are included in this list.

**These are correlations with criterion, and not necessarily coefficients of validity.

TABLE V—Continued

| Title | Reliability | Validity |
|---|---|---|
| **College Aptitude Test.** Department of Psychology, University of Minnesota Press, Minneapolis, Minn. (Cited: 10) | | .27 (10, grades in student teaching) |
| **Columbia Research Bureau English Test.** Bureau of Publications, Columbia University, New York. (Cited: 10) | | .22 (10, grades in student teaching)<br>.31 (10, honor point ratio—major)<br>.29 (10, college aptitude test scores)<br>.08 (10, Miller Analogies Test scores) |
| **Cooperative Contemporary Affairs Test for College Students,** Form 1941, E. F. Lindquist and others. Cooperative Test Service, New York; American Council on Education, Washington, D. C. (Cited: 102, 103, 104) | .97 (A) | .04 (103, practice teaching grades)<br>.12 (102, supervisory ratings) |
| **Cooperative English Test, Reading Comprehension,** Test C2. Cooperative Test Service, New York; American Council on Education, Washington, D. C. 1940. (Cited: 56, 61, 73) | .96 (A) | .10 (73, pupil gain)<br>—.34 (73, pupil evaluations)<br>.24 (73, M-Blank ratings)<br>.12 (61, M-Blank ratings)<br>.13 (61, pupil gain)<br>.13 (56, practice teaching grades)<br>—.12 (56, in-service ratings) |
| **Cooperative English Test, Usage,** Spelling, Vocabulary, Form 1937. Cooperative Test Service, New York; American Council on Education, Washington, D. C. (Cited: 73) | | .22 (73, M-Blank ratings)<br>—.32 (73, pupil evaluation)<br>.01 (73, pupil gain) |
| **Cooperative General Achievement Test,** Revised Series. Cooperative Test Service, New York; American Council on Education, Washington, D. C. (Cited: 101, 102, 103, 104) | .60–.70 | |
| Mathematics | | .14 (103, practice teaching)<br>—.08 (102, supervisory ratings) |
| Natural science | | .10 (103, practice teaching)<br>—.24 (102, supervisory ratings) |
| Social studies | | .02 (103, practice teaching)<br>.13 (102, supervisory ratings) |
| **Cooperative General Culture Test,** Form Q, 1940. Cooperative Test Service, New York; American Council on Education, Washington, D. C. (Cited: 56, 61, 101, 102, 103, 104) | .97 (A) | .10 (56, practice teaching)<br>.03 (61, M-Blank ratings)<br>—.13 (61, student teaching grades)<br>—.23 (61, pupil gain)<br>.05 (73, M-Blank ratings)<br>—.34 (73, pupil evaluations)<br>.23 (73, pupil gain)<br>—.02 (103, practice teaching)<br>.01 (102, supervisory ratings) |
| **Cooperative Survey Test in Mathematics,** Form P, Constance M. McCullough and others. Cooperative Test Service, New York. (Cited: 29) | | .33 (29, success in graduate education courses) |
| **Coxe- Orleans Prognosis Test of Teaching Ability,** Warren W. Coxe and Jacob S. Orleans. World Book Co., Yonkers, New York, 1930. (Cited: 33, 45, 101, 102, 103, 104, 136) | .98 (A) | .53 to .84 (author, comprehensive achievement)<br>.35 (45, Bernreuter Bs)<br>—.40 (45, Bernreuter Bn)<br>.26 (45, Bell Inventory E)<br>.34 (45, Bell Inventory T)<br>.26 (45, Willoughby E. M. S)<br>.36 (103, practice grades)<br>.01 (102, supervisory rating) |
| **Diagnostic Teacher Rating Scale of Instructional Activities,** T. L. Torgerson. Public School Publishing Co., Bloomington, Ill., 1930. (Cited: 44, 52, 66, 75, 96, 97) | .92 (97, 9) (A) to .89 (A) | .34 (97, composite pupil change)<br>.43 (96, composite pupil change)<br>.43 (44, composite pupil change)<br>.33 (9, composite 19 measures) |

TABLE V—Continued

| Title | Reliability | Validity |
|---|---|---|
| **Educational Information and Application,** W. W. Cook. University of Minnesota, Minneapolis, Minn. (Cited: 29) | | .60 (29, success in graduate education courses) |
| **Giles Recitation Score Card.** World Book Co., Yonkers, New York, 1945. (Cited: 9) | .89 (9) | .74 (9, composite 19 measures) |
| **Graphic Rating Scales for Teachers,** Max Freyd. C. H. S. Stoelting Co., Chicago, Ill. (Cited: 133) | | .09 (133, teaching success) |
| **Henmon-Nelson Test of Mental Ability,** Form C, V. A. C. Henmon and M. J Nelson. Houghton Mifflin Co., New York, 1935. (Cited: 56, 61, 73) | .89 (A) | .07 (56, practice teaching grade)<br>—.17 (56, in-service ratings)<br>.57 (56, Reading Comprehension)<br>.53 (56, General Culture)<br>.30 (56, U grade point average)<br>.26 (56, mark, Psy. of Learning)<br>.39 (56, test on Gates)<br>.11 (M-Blank ratings)<br>.02 (student teaching grades)<br>.02 (pupil gain)<br>.25 (scholarship) |
| **Humm-Wadsworth Temperament Scale,** 1940 edition, Doncaster G. Humm and Guy W. Wadsworth, Jr. Humm Personnel Service, Los Angeles, Calif. (Cited: 46, 101, 102, 103, 104) | .80 to .85 | .63 (103, practice teaching grade)<br>.65 (102, supervisory rating)<br>.05 (102, success ratings) |
| **Humm-Wadsworth Qualitative Estimates,** Doncaster G. Humm and Guy W. Wadsworth, Jr. Humm Personnel Service, Los Angeles, Calif. (Cited: 101, 103, 104) | | .63 (103, practice teaching grade) |
| **Link Personality Quotient Test (Inventory of Activities and Interests.** Henry C. Link. Psychological Corporation. (Cited: 61) | .73 to .88 (A) | .07 (61, pupil gain)<br>.36 (61, M-Blank)<br>.44 (61, professional course grade)<br>.30 (61, high school rank)<br>.13 (61, Henmon Nelson)<br>.16 (61, student reaching grades)<br>.03 (61, scholarship)<br>.42 (61, in-service rating) |
| **MacQuarrie Test for Mechanical Ability,** T. W. MacQuarrie. California Test Bureau, Los Angeles. (Cited: 101, 102, 103, 104) | | .31 (103, practice teaching grade)<br>—.01 (102, supervisory ratings)<br>.48 (Otis Group Intelligence)<br>.20 (Buros) |
| Tracing | .80 (A) | |
| Typing | .75 (A) | |
| Dotting | .74 (A) | |
| Copying | .86 (A) | |
| Location | .72 (A) | |
| Blocks | .80 (A) | |
| Pursuit | .70 (A) | |
| Total score | .90 (A) | |
| Retest | .90 (A) | |
| **Meier Art Tests: I, Art Judgment,** Norman Charles Meier. Bureau of Educational Research and Service, State University of Iowa, Iowa City. (Cited: 101, 102, 103, 104) | .70 to .80 (A) | .21 (103, practice teaching)<br>.07 (102, supervisory ratings) |
| **Mental Alertness Test,** L. Omwake and others. Center for Psychological Service, George Washington University, Washington, D. C. (Cited: 57) | | .57 (G.W.U. Teaching Apt. Test) |
| **Michigan Education Association Teacher Rating Card,** Michigan Education Association, Lansing, Michigan. (Cited: 44, 52, 66, 75, 96, 97) | .93 (9) | .23 (97, composite pupil change)<br>.39 (96, composite pupil change)<br>.39 (44, composite pupil change)<br>.84 (9, composite 19 measures) |

TABLE V—Continued

| Title | Reliability | Validity |
|---|---|---|
| **Miller Analogies Test**, W. S. Miller, University of Minnesota, Minneapolis, Minnesota. (Cited: 10, 79, 123) | | .20 (10, student teaching grades)<br>.48 (79, education grad. courses) |
| **Minnesota Multiphasic Personality Inventory**, Revised Edition, Starke R. Hathaway and J. Charnley McKinley. Psychological Corporation. (Cited: 14) | .71 (A) to .85 | |
| **Minnesota Reading Examination for College Students**, Melvin E. Haggerty and Alvin C. Eurich. University of Minnesota Press, Minneapolis, Minnesota. (Cited: 10) | | .25 Student teaching grades<br>.48 to .54 Two parts of test |
| Form A, H. S. Seniors (I) | .93 (10) | |
| College juniors (I) | .91 (10) | |
| Whole test | .86 (10) | |
| H. S. Seniors (II) | .69 (10) | |
| College Juniors (II) | .78 (10) | |
| **Morris Trait Index L**, E. H. Morris. Public School Publishing Co., Bloomington, Ill., 1929. (Cited: 44, 45, 52, 80, 96, 97, 101, 102, 103, 104, 118) | .78 (52) | .22 (9, composite pupil change)<br>.20 (97, composite pupil change)<br>—.17 (96, composite pupil change)<br>.44 (103, practice teaching)<br>.00 (102, supervisory ratings) |
| **National Teacher Examination 1941.** Cooperative Test Service, New York; American Council on Education, Washington, D. C. (Cited: 41, 73, 99, 135) | .95 (A) | —.15 (73, M-Blank Ratings)<br>—.30 (73, pupil evaluation)<br>.45 (73, pupil gain) |
| **Ohio State University Psychological Tests**, (Form 18), H. A. Toops, Ohio College Association. (Cited: 45) | .93 (A) | —.33 (45, Bernreuter Bn)<br>.68 (45, Point Honor Ratio) |
| **Orientation Test Concerning Fundamental Aims of Education** (1935 Revision), Alfred S. Lewerenz and Harry C. Steinmetz. Southern California Book Depository, Ltd., Los Angeles, Calif., 1935. (Cited: 44, 52, 80, 96, 97) | .97 (52)<br>.89 (A) | .30 (97, composite pupil change)<br>—.06 (96, composite pupil change) |
| **Otis Self-Administering Tests of Mental Ability** (Higher Examination), Arthur S. Otis. World Book Co., Yonkers, N. Y. (Cited: 84, 91) | .92 (A) | —.104 (91, Trait index) |
| **Pennsylvania Teacher Rating Score Card.** Department of Public Instruction, Teachers Bureau, Harrisburg, Pa. (Cited: 9) | .92 (9) | .90 (9, composite 19 measures) |
| **Professional Tests for Elementary Teachers**, F. B. Knight and others. World Book Co., Yonkers, N. Y. (Cited: 64, 123) | | .33 (123, in-service ratings)<br>.02 (123, composite ratings)<br>.60 (64, in-service ratings) |
| Aptitude Tests: | | .47 (A, Professional judgment)<br>.15 (A, Theory and practice of teaching)<br>.85 (A, Reading comprehension)<br>.70 (A, Social information)<br>.49 (School and class management)<br>.12 (A, Professional information)<br>.78 Total |
| Subject Placement Tests: | | .52 (A, Reading)<br>.71 (A, Arithmetic)<br>.49 (A, Spelling)<br>.73 (A, Writing)<br>.86 (A, Total)<br>.78 (A, Total) |

TABLE V—Continued

| Title | Reliability | Validity |
|---|---|---|
| **Psychological Examination for College Freshmen**, L. L. Thurstone and Thelma Gwinn Thurstone. American Council on Education, Washington, D. C. 1936, 1938 and 1939. (Cited: 44, 52, 66, 73, 61, 96, 97, 101, 102, 103, 104) | .89 (52)<br>.93<br>to<br>.98 (A) | .57 (97, composite pupil change)<br>.53 (66, composite pupil change)<br>—.10 (96, composite pupil change)<br>—.12 (66, composite supt. rating)<br>—.18 (66, composite supr. rating)<br>.36 (9, composite with 19 measures)<br>.24 (73, super. ratings, 1938–39)<br>—.005 (73, pupil gain)<br>.10 (61, M-Blank ratings)<br>—.24 (61, student teaching grades)<br>—.26 (61, pupil gain) |
| **Purdue Rating Scale for Instructors**, H. H. Remmers and G. C. Brandenberg. Published in **Educational Administration and Supervision**, May 1927. (Cited: 19, 22, 93, 112) | | |
| Sum of traits | .95 (A) | Used as criterion (22) |
| **Rudisill Scale for the Measurement of the Personality of Elementary School Teachers**, Mabel Rudisill. Unpublished material, University of Wisconsin, Madison, Wisconsin. (Cited: 44) | | .11 (44, composite teacher tests)<br>.03 (44, composite pupil change)<br>.16 (44, composite teacher rating)<br>—.10 (44, composite three personality scales) |
| **Scale of Civic Beliefs**, J. W. Wrightstone. From "Measuring Some Major Objectives of the Social Studies," **School Review**, XLIII, 1935, p. 776. (Cited: 44, 52, 80, 96) | .96 (52) | .29 (96, composite pupil change) |
| **Scale for Measuring Attitude toward Teachers and the Teaching Profession**, Tressa C. Yeager, Bureau of Publications, Teachers College, Columbia University, 1935. (Cited: 44, 52, 66, 80, 96, 97, 130, 137) | .69 (52)<br>.88 (A) | .45 (97, composite pupil change)<br>.16 (66, composite pupil change)<br>.22 (96, composite pupil change)<br>—.15 (66, composite supt. rating)<br>—.10 (66, composite supr. rating) |
| **Schutte Scale for Rating Teachers**, T. A. Schutte. World Book Co. Yonkers, N. Y., 1923. (Cited: 9) | .92 | .79 (9, composite 19 measures) |
| **Seashore Test for Musical Talents.** University of Iowa Press, Iowa City, Iowa. (Cited: 101, 102, 103, 104) | .62 (A)<br>to<br>.89 | —.14 (103, practice teaching)<br>—.05 (102, supervisory ratings) |
| **Sims Score Card for Socio-Economic Status**, Form C, V. M. Sims. Public School Publishing Co., Bloomington, Ill., 1928. (Cited: 45, 96, 97, 133, 137) | .84 (97) | —.15 (96, composite pupil change) |
| **Social Attitudes of Secondary-School Teachers**, G. W. Hartmann. John Dewey Society, New York, 1937. (Cited: 44, 52, 80, 96, 97, 130) | | .52 (97, composite pupil change)<br>.38 (96, composite pupil change) |
| Part I | .94 (97) | |
| Part II | .93 (97) | |
| **Social Intelligence Test**, F. A. Moss and others. Center for Psychological Service, George Washington University, Washington, D. C., 1930. (Cited: 133, 57) | .88 (A) | .15 (133, teaching success)<br>.35 (9, composite 19 measures) |
| **Standard Achievement Test on Principles of Teaching in Secondary Schools**, C. W. Odell. Public School Publishing Co., Bloomington, Ill., 1925. (Cited: 133) | | .14 (133, teaching success) |
| **Standard Achievement Test on Aims, Purposes, Objectives, Attributes, and Functions in Secondary Education**, Joseph J. Weber. Public School publishing Co., Bloomington, Ill. (Cited: 133) | | .09 (133, teaching success) |

TABLE V—Continued

| Title | Reliability | Validity |
|---|---|---|
| **Stanford Educational Aptitude Test,** Milton B. Jensen. Stanford University Press, Stanford, California, 1928. (Cited: 44, 52, 96, 97, 101, 102, 103, 104) | (T-A) .91 (A) (T-A .10 (97, comp. pupil change)<br>(A-R) .94 (A) (A-R) .04 (97, comp. pupil change)<br>(T-R) .85 (A) (T-R) .02 (97, comp. pupil change)<br>(T-A) .08 (96, comp. pupil change)<br>(A-R) —.15 (96, comp. pupil change)<br>(T-R) —.13 (96, comp. pupil change)<br>(A-R) .19 (103, practice teaching)<br>(A-R) .02 (102, supervisory rating)<br>(T-R) .09 (103, practice teaching)<br>(T-R) .14 (102, supervisory rating)<br>(T-A) .01 (103, practice teaching)<br>(T-A) .04 (102, supervisory rating) | |
| **Statements About Education,** P. W. Harnly. Described in "Attitudes of High School Seniors Toward Education." **School Review,** XLVII, September, 1939. (Cited: 66) | .93 (97) | .13 (66, comp. pupil change)<br>.05 (66, comp. pupil change)<br>.02 (66, comp. pupil change)<br>—.32 (66, comp. pupil change)<br>—.02 (66, comp. pupil change)<br>.39 (66, comp. supt. rating)<br>.32 (66, comp. supr. rating) |
| **Strayer-Engelhardt Teacher Rating Card,** George D. Strayer and L. N. Engelhardt. C. F. Williams and Son, Inc., Albany, N. Y. (Cited: 9) | .91 (9) | .80 (9, composite 19 measures) |
| **Study of Values: A Scale for Measuring the Dominant Interests of Personality,** Gordon W. Allport and Philip E. Vernon. Houghton Mifflin Co., New York. (Cited: 101, 102, 103, 104) | .70 to .90 | —.33 to .25 (103, practice teaching)<br>—.23 to .26 (102, supervisory rating) |
| **Teacher-Pupil Relationships,** T. L. Torgerson and others. Unpublished materials, Department of Education, University of Wisconsin, Madison, Wisconsin, 1938. (Cited: 44, 52, 80, 96, 130) | | .22 (96, comp. pupil change) |
| **Teachers College Personnel Assoc. Test for College Aptitude.** (Cited: 35, 96, 97) | | .48 (35, grade point average)<br>.73 (35, Achievement)<br>.85 (35, English)<br>.40 (35, Music)<br>—.05 (35, Personality)<br>.46 (35, Personal data) |
| **Teachers College Personnel Association Test for Elementary Achievement.** (Cited: 38) | | .50 (38, grade point average)<br>.73 (38, intelligence)<br>.74 (38, English)<br>.42 (38, Music)<br>—.01 (38, personality)<br>.47 (38, personal data) |
| **Teachers College Personnel Association Test for Personnel Data.** (Cited: 38) | | .35 (38, grade point average)<br>.46 (38, intelligence)<br>.47 (38, achievement)<br>.50 (38, English)<br>.36 (38, music)<br>—.12 (38, personality) |
| **Teachers College Personnel Association Test for English.** (Cited: 38) | | .51 (38, grade point average)<br>.85 (38, intelligence)<br>.74 (38, achievement)<br>.43 (38, music)<br>.004 (38, personality)<br>.50 (38, personal data) |
| **Teachers College Psychological Examination,** 1934 edition. State Teachers College, St. Cloud, Minnesota. (Cited: 44, 52, 80, 96, 97) | .80 (52)<br>.95 (A) | .40 (97, comp. pupil change)<br>.05 (96, comp. pupil change) |

TABLE V—Continued

| Title | Reliability | Validity |
|---|---|---|
| **Teaching Aptitude Test,** F. A. Moss and others. Center for Psychological Services, George Washington University, Washington, D. C., 1927. (Cited: 45, 57, 101, 102, 103, 104, 118) | .91 (A) | .30 to .50 (A, teacher ratings)<br>.60 (A, Social Intelligence Test)<br>.57 (A, Mental Alertness Test)<br>—.44 (45, Bernreuter Bn)<br>.32 (45, Bernreuter Bs)<br>.19 (103, practice teaching)<br>—.19 (102, supervisory rating) |
| **Test of Ability to Discriminate Between Procedures Proposed as Solutions of Classroom Problems in High School,** C. W. Boardman. Teachers College, Columbia University, New York. (Cited: 16) | .79 (16) | .28 (16, in-service ratings) |
| **Test of Professional Information,** C. W. Boardman. Teachers College, Columbia University, New York, 1928. (Cited: 16) | .90 (16) | |
| **Test of Social Efficiency,** Virgil D. Jackson, Described in "Measurement of Social Proficiency." **Journal of Experimental Education,** VIII, June 1940. (Cited: 66) | .82 (66) | —.37 (66, comp. pupil change)<br>.01 (66, comp. supt. rating)<br>—.13 (66, comp. supv. rating) |
| **Theory and Practice of Mental Hygiene,** T. L. Torgerson. Unpublished materials, Department of Education, University of Wisconsin, Madison, Wisconsin. (Cited: 52, 66, 96, 97) | | .45 (97, comp. pupil change)<br>.24 (66, comp. pupil change)<br>.17 (66, comp. supt. rating)<br>.18 (66, comp. supr. rating) |
| **Thorndike's College Entrance Examination,** First Section. (Cited: 63) | .81 | .12 (63, in service ratings) |
| **Thurstone Personality Schedule.** L. L. Thurstone and Thelma Gwinn Thurstone. University of Chicago Press, 1929. (Cited: 91, 101, 102, 103, 104) | | —.36 (103, teaching rating)<br>—.36 (103, practice teaching)<br>—.55 (102, supervisory rating) |
| **Vocational Interest Blanks for Men and Women,** E. K. Strong. Stanford University, Stanford, California. (Cited: 101, 102, 103, 133) | .85 to .90 | .08 (102, student teaching ratings)<br>.08 (102, in-service ratings)<br>.20 (9, composite pupil gain) |
| **Washburne Social Adjustment Inventory,** Sapich Edition, J. N. Washburne. Syracuse University, Syracuse, N. Y. (Cited: 44, 52, 80, 96, 97) | .92 (52) | .13 (97, comp. pupil change)<br>.06 (96, comp. pupil change)<br>.06 (44, comp. pupil change)<br>.47 (44, comp. teacher tests)<br>.40 (44, comp. teacher ratings)<br>.47 (44, comp. 3 personality scales) |
| **Willoughby Emotional Maturity Scale,** R. R. Willoughby. Stanford University Press, Stanford, California, 1931. (Cited: 45, 101, 102, 103, 104) | | —.37 (45, Bn, neuroticism)<br>.56 (45, Bn, self-confidence)<br>—.36 (45, Bn, introversion)<br>.38 (45, Bn, self-sufficiency)<br>.55 (45, Bn, dominance)<br>.36 (45, Bell, home adjustment)<br>.26 (45, Bell, Health adjustment)<br>.39 (45, Bell, social adjustment)<br>.44 (45, Bell, emotional adjustment)<br>.55 (45, Bell, total adjustment)<br>.19 (103, practice teaching)<br>.02 (102, supervisory rating) |
| **Wrenns Study Habits Inventory,** Revised, Gilbert Wrenn. Stanford University Press, Stanford, California, 1940. (Cited: 45) | | —.41 (45, Bn, introversion)<br>.45 (45, Bell, health adjustment)<br>—.32 (45, Bernreuter, neurotisicm)<br>.21 (45, Bernreuter, self-sufficiency)<br>.20 (45, Bernreuter, dominance)<br>.05 (45, Bernreuter, sociability)<br>.41 (45, Bernreuter, self-confidence)<br>.08 (45, Bell, home adjustment)<br>.22 (45, Bell, social adjustment)<br>.42 (45, Bell, emotional adjustment)<br>.38 (45, Bell, total adjustment)<br>.36 (45, Willoughby, E M scale) |

plex activity of evaluation. To evaluate, one assesses the implications of a given set of facts for different purposes, persons, and conditions. We need both measurement and evaluation.

In addition to the foregoing conclusions, certain recommendations would seem warranted:

1) The collection of data relative to teachers and teaching might be facilitated if the number of different aspects about which information is desired could be reduced. Some reduction is introduced through the categories set up in Table I. Further reductions are desirable on practical grounds if such reductions are possible.

2) It might help to have all of the instruments revalidated upon the same samples and under comparable conditions. Several such validations should give a more accurate picture than can now be had about the validity of various data-gathering devices.

3) Many of the instruments here reported upon have been validated against general criteria of teaching efficiency of various sorts. It would seem desirable to study their relation also to specific functions and aspects of teaching efficiency.

4) Most of the correlations reported in the literature are really not validity coefficients in the sense that they show whether the instrument measures what it purports to measure but rather coefficients of prediction. Studies need to be so designed as to indicate both relationship and validity. The latter type of study will need to precede the former.

5) The different types of data-gathering devices appear to supplement each other in a manner to make a multiple approach desirable. A combination of the so-called objective and subjective devices appear to give, under current conditions, better results than either employed separately (131).

## The Prediction of Teaching Efficiency

There are many occasions upon which persons wish to make predictions relative to the efficiency of teachers, such as in selection and recruitment; in social, vocational, and educational guidance; in the education of teachers; in placement; and in the management of teachers in service. When one sets up entrance or certification standards, that requires certain courses or sequences of training, or advises for or against entrance or non-entrance into the profession, predictions are made. The predictions may not rest upon fact, and may not be good, but predictions are made nonetheless. One of the objectives of the research in this area is improved predictions.

Predictions can be made at many different points in the training program and for many different purposes. One may wish to know, for example, what the chances are that high school seniors expressing an interest in teaching, may enter college, or the chance that freshmen entering college may graduate, take teaching positions, succeed, or continue in teaching. One may wish also to predict success in different types of positions, in different aspects of teaching, and under different conditions. Too many persons think of prediction in a very narrow technical sense, rather than in terms of its broader implications and everyday use.

Certain conclusions seem possible from a survey of the research in this area:

1) Many different criteria of efficiency have been employed. The choice of criteria will depend in part upon the purposes for which predictions are made, such for example, as success in practice teaching, academic achievement, or in service success. Success in one does not, however, necessarily mean success in another.

2) Where several criteria are employed to measure success in a given respect, as for example, success in service, the intercorrelations are low. Apparently the several criteria, such as pupil growth and achievement, supervisory ratings, pupil ratings, and tests of qualities commonly associated with teaching success, measure different things.

3) The trend has been toward the inclusion of more measures and aspects of teacher ability in prediction studies. The later studies in this field frequently employ 15 to 20 variable prediction equations.

4) The accuracy of the predictions seem to have improved as more and better measures have been employed and as the criterion of efficiency has been refined. Multiple R's in the 70's and 80's are not uncommon in carefully designed studies.

5) To date, the best predictions seem to be had from combinations of so-called subjective and objective measures. While subjective measures are in general more unreliable than objective measures they appear to provide in some instances data on aspects of efficiency

not as yet adequately covered by objective measures.

Certain recommendations would seem to be warranted from a study of the researches in this area:

1) More attention needs to be given in prediction studies to the criterion of teaching efficiency. It would seem that the criterion might be expressed as desirable qualities in teachers, as competencies, as behavior controls, or as pupil growth,—in terms of each separately or in terms of various combinations of these. Possibly one might, for example, desire to predict the acceptability of various sorts of teachers to various types of supervisors; or the likelihood that different sorts of changes might take place in their pupils; or that students preparing to be teachers might complete their course work with acceptable records. There are many different ways of looking at criteria. Some workers continue to use, however, inadequately validated data-gathering devices in establishing a criterion. While one should not expect perfection, the devices chosen or constructed for this purpose should be shown to be validly related to the named criterion. In a very real sense, the criterion is the foundation of all such studies.

2) Additional prediction studies might well be preceded by or run concurrently with additional attempts at factor analysis. Many of the measures now used are doubtlessly closely related and might be reduced in number; then too there are doubtlessly many unmeasured aspects of teaching efficiency and prerequisites that need consideration.

3) More attention needs to be given to differential predictions. To date, prediction studies have been concerned in the main with the prediction of success in general rather than with the prediction of success for different sorts of teaching positions, aspects of teaching, and school-community situations.

4) More attention should be given to the situational factors in success. It is easier to succeed in some situations than others. More attention needs to be given to these situational aspects of efficiency.

5) More long time studies of success need to be made to ascertain the growth and decline of efficiency and its prerequisites. Many of the studies are for very short periods of time; seldom are long term followups reported.

## General Summary

### Observations, and Conclusions

A few overall observations would seem worth emphasizing:

1) A central problem in the selection, preparation and management of the teaching personnel consists in the development of an adequate definition of the sorts of teachers sought for specific purposes and situations, as well as for general purposes and situations. The product sought is not too well defined in most instances. Attention seems all too frequently to be upon means rather than goals, or at least means divorced from goals. The current means were doubtless at one time associated with important goals, but now, long after conditions may have changed, many practices and course requirements continue, probably as operational goals in and of themselves, divorced from current pupil and societal needs.

2) More adequate record systems are needed. To learn more about our various programs of action more information is needed about them and their effectiveness. Adequate personnel records are also needed giving precise information relative to the experience record and personal characteristics of individuals preparing to teach or now in service.

3) By and large, more fact finding in the field of teacher education is needed. Too many persons seem to feel that since they have personally hit upon a given course of action, it must be good. This is not necessarily true. This statement applies to decisions relating to all aspects of teacher preparation and management: selection, recruitment, guidance, education, placement, follow-up and management in service. Planning must be accompanied by evaluation.

4) More information is needed about how traits, competencies, and behavior controls function to make a good teacher. Each approach is widely employed, and probably not without reason, but more studies are needed indicating how these function in general and in particular persons and situations.

5) There seem to be certain misuses of statistical techniques that occur with considerable frequency in our thinking and educational writing that could probably be corrected with a little attention to them: a) coefficients of correlation cannot be taken at face value; a coefficient of correlation is the product of many factors and needs careful interpretation;

b) the coefficient of correlation represents going togetherness of certain types of data and not causal relations; c) when our concern is with correlations that represent some positive or negative relationships they must be shown to differ from zero by amounts that are statistically significant; d) workers should be on the lookout for selective factors and errors of measurement that may influence the size and direction of coefficients of correlation; such interpretations as one sometimes sees in the interpretation of the correlational data relative to intelligence wherein it is concluded that intelligence is not a factor in teaching success, should not persist.

6) We need a careful rethinking of our statistical procedures as applied to teacher personnel. We very obviously need more reliable means of evaluating our programs of action; whether current statistical procedures are adequate and appropriate or not for these purposes needs to be ascertained. Very frequently the assumptions upon which these procedures are based are violated in educational research. Persons not well acquainted with mathematical lore fail to note that most procedures can be used only under a very restricted set of conditions. Probably even more important is the fact that historically in its development mathematics was developed to study physical phenomena; it may not apply in many important respects to human behavior. At least some of its procedures seem to run contrary to reasonably well established facts in human psychology. The difficulty may not be, however, with our mathematics but with those who use it. In any case we need not less objective means, but objective tools designed for education and in keeping with what seems to be established fact in this area.

7) We sometimes seem to forget that all courses of action take place in a very definite frame of reference, cultural pattern, philosophy, and system of values. There should be more awareness of these and their implications for research and practice.

By and large, the overall picture and future for the measurement and prediction of teaching efficiency and its prerequisites seems promising. Studies such as those by Rostker (97), Rolfe (96), La Duke (66), Lins (73), and Von Haden (131) show what can be done under carefully controlled conditions. With more accurate definitions of teaching, with judicious choice of aspects of teaching to be studied, better data-gathering devices, with more attention to the situation into which teachers go and in which they are likely to success, better criteria of efficiency, and improved statistical procedures the results should be greatly improved and stabilized.

Some persons seem to be unduly concerned over the low correlations found in the many studies in this area. Low correlations are to be expected when a limited aspect of teaching is studied even with perfect instruments of measurement. Teaching efficiency is the product of many things. No one may contribute much but taken together they constitute teaching efficiency. At present we tend to duplicate measurements in certain areas to the partial neglect or exclusion of others. To get better predictions one must get a better spread of the aspects of teaching considered. With a better spread of aspects of teaching studied, and due consideration to other demands of the situation, reasonably accurate predictions should be the rule rather than the exception. Help in the choice of the aspects of teaching to be considered will be found in Table I in the aspects most frequently studied and the results secured. No attempt will be made to recapitulate these details here. Help in the choice of data-gathering devices should be found in Table V. No single set of data-gathering devices can be said to be equally effective for all purposes and situations. While this table is by no means complete, it is illustrative of what one may expect to find when devices of the sorts here listed are used. In many instances one may prefer to develop his own data-gathering devices.

In concluding this summary, it should probably be said again that much of the research here summarized concerns itself merely with the common elements that permeate different situations, persons, and conditions. Little research has been devoted to differential prediction. Differences in the requirements for efficiency in different subjects, grades, and school community situations remain yet, by and large, for future investigation.

TABLE VI

SUMMARIES OF INVESTIGATIONS RELATING TO THE MEASUREMENT AND PREDICTION OF TEACHING EFFICIENCY

*I. Studies using practice teaching grades or ratings of student teaching as the criterion of teaching efficiency*

Summary Number 1 (2)

a. Reference:
Almy, H. C. and Sorenson, Herbert, "A Teacher-Rating Scale of Determined Reliability and Validity," *Educational Administration and Supervision*, 16:179–86, March, 1930.

b. Criterion:
Academic and practice teaching grades.

c. Number of persons studied:
Seventy-seven persons engaged in education work submitted lists of traits in order of their importance; 110 cadet teachers were evaluated by 198 ratings.

d. Aspects of teachers or teaching studied:
Resourcefulness, enthusiasm, leadership, cooperation, trustworthiness, honesty, fairness, sympathy, tact, patience, courteousness, love for children, progressiveness, poise, kindness, originality, good humor, helpfulness, promptness, and foresight.

e. Data-gathering devices:
Almy–Sorenson Teacher Rating Scale.

f. Results:
Correlations were obtained as follows:

| | |
|---|---|
| Students' last semester academic grades and average rating | .45 |
| Academic and teaching grades | .49 |
| Ratings and teaching grades | .69 |
| Rating and teaching grade (when made by same supervisor) | .74 |
| Dual ratings by different raters | .72 |
| Re-ratings by same rater | .92 |
| Correlation of trait scores or sums of irregular halves of the scale | .94 |
| Correlations between halves of the scales | .92 |

Summary Number 2 (10)

a. Reference:
Bent, Rudyard K. "Relationships Between Qualifying Examinations, Various Other Factors, and Student Teaching Performance at the University of Minnesota." *Journal of Experimental Education*, 5:251–55, March, 1937.

b. Criterion:
Ratings made by critic teacher.

c. Number of persons studied:
597 juniors, College of Education, University of Minnesota, who did student teaching during 1932–3; 487 juniors, College of Education, University of Minnesota, who did student teaching during 1933–4.

d. Aspects of teachers or teaching studied:
Knowledge of subject, professional information, intelligence, general academic achievement, English skills, reading ability.

e. Data-gathering devices:
Columbia Research Bureau English Test; judgments of essays written under supervision; tests made up from materials in secondary school textbooks used at the University of Minnesota (Major A); tests designed to measure complete and thorough mastery of the teaching majors (Major B); Miller Analogies Test (a psychological test, University of Minnesota); College Aptitude Test (a psychological test, University of Minnesota); Minnesota Reading Test (University of Minnesota Press); rank in the senior class of high school; honor point ratio in education, the major, English, and in all subjects; hours of credit in education, English, the major teaching subject, and in all subjects combined.

f. Results:
Coefficients of Correlations Between Conditioning Factors and Judgments Relative to Student Teaching Performance (1932–33, 1933–34 groups)

| Conditioning Factor | r 1932–33 | r 1933–34 |
|---|---|---|
| 1. Hours of credit in all subjects | .46 | |
| 2. General honor point ration (all subjects) | .46 | .12 |
| 3. Honor point ratio in the major | .45 | |
| 4. Composite score (qualifying examinations) | .32 | |
| 5. Credits in education | .30 | |
| 6. Honor point ratio in English | .29 | |
| 7. College Aptitude Test Scores | .27 | .03 |
| 8. Honor point ratio in education | .27 | |
| 9. Total education scores (qualifying examinations) | .26 | .05 |
| 10. Minnesota Reading Test scores | .25 | |
| 11. Total English scores (qualifying examination) | .22 | .14 |
| 12. High School rank | .21 | |
| 13. Miller Analogies Test scores | .20 | .14 |

Summary Number 3 (19)

a. Reference:
Bowman, Earl C. "Pupil Ratings of Student-Teachers." *Educational Administration and Supervision*. 20:141–46, February, 1934.

b. Criterion:
For 1930–31 study, subjective rating on seven abilities; for 1931–32 study, Purdue rating scale for instructors; for 1932–33 study, subjective rating on 12 characteristics of good teaching.

c. Number of persons studied:
Three studies: 1930–31, pupils rated 21 student teachers; 1931–32, pupils rated 30 student teachers, also, critic teacher rated student teachers; 1932–33, nine student-teachers were selected for a special investigation of the effect of school marks on ratings.

d. Aspects of teachers or teaching studied:
Qualities not stated, except it is known that the Purdue Rating Scale for Instructors was used.

e. Data-gathering devices:
Purdue Rating Scale for Instructors, informal pupil ratings.

f. Results:
In the main, pupils' and teachers' judgments as to the presence or absence of the traits of the Purdue Scale show little agreement. This may be due to a wide difference of opinion in interpreting the meaning of the traits, or assuming agreement as to meaning, or difference in keenness of perception of those indices which reveal the presence or absence of the traits.

TABLE VI—Continued

Summary Number 4 (33)

a. Reference:
Daldy, Dorothy M. "A Study of Adaptability in a Group of Teachers." *British Journal of Educational Psychology*, 7:1–22, 31, February, 1937.

b. Criterion:
Ratings by instructors.

c. Number of persons studied:
31 domestic science college student teachers, teaching in elementary schools.

d. Aspects of teachers or teaching studied:
Adaptability.

e. Data-gathering devices:
a. Observations by the author, a lecturer in education, were used as a basis for determining adaptability and evaluating the student teachers; b. data on home conditions; c. intelligence test (No. 33) of the National Institute of Industrial Psychology.

Evaluation of student teachers efficiency was based on their ability to: a. Make contact with the pupils and enlist their interest; b. select information satisfactorily; c. ask useful questions; d. present information clearly, definitely and in a good dequence; e. organize satisfactorily—e. g., timing the lesson, sharing equipment, etc.; f. supervise satisfactorily the work done both by groups and individuals; g. maintain order satisfactorily; h. assume a manner of authoritativeness and calmness and avoid "walled-off-ness."

f. Results:
Seventeen out of the 31 were found to have difficulty in adaptation.

Of 14 well-adapted student teachers, 7 were recognized as good; the remaining 7 as satisfactory.
Of the 17 ill-adapted, 4 were classed as good; 10 as satisfactory though many were at the bottom of this classification; 2 as weak; 1 as failure.

Summary Number 5 (36)

a. Reference:
Dodd, M. R. "A Study of Teaching Aptitude." *Journal of Educational Research*, 26:517–21, March, 1933.

b. Criterion:
Supervisors' ratings of practice teachers; average scholarship marks.

c. Number of persons studied:
90 practice teachers in the school of education, West Virginia University.

d. Aspects of teachers or teaching studied:
Teaching aptitude.

e. Data-gathering devices:
Coxe–Orleans Prognosis Test of Teaching Ability by Warren Coxe and Jacob S. Orleans, 1930, World Book Co., Yonkers, New York. Supervisors' Rating Sheet, average scholarship marks.

f. Results:

Zero Order Correlations

| | r |
|---|---|
| Weighted score and raw score | .91 |
| Weighted score and supervisors' ratings | .39 |
| Weighted score and scholarship | .50 |
| Raw score and supervisors' rating | .43 |
| Raw score and scholarship | .64 |
| Supervisors' ratings and scholarship | .35 |

Correlations of the Scores on the Several Sections of the Prognosis Test with Supervisors' Ratings and with Scholarships

| Factor | Correlation with Supervisors' Ratings | Correlation with Scholarship |
|---|---|---|
| Score, Part I (General Information) | .13 | .40 |
| Score, Part II Professional Interest) | .45 | .36 |
| Score, Part III (Lessons in Education) | .28 | .29 |
| Score, Part IV (Reading Comprehension) | .19 | .55 |
| Score, Part V (Problems in Education) | .06 | .32 |

Summary Number 6 (62)

a. Reference:
Kemp, L. C. D. "The Prediction of Teaching Success." *The Forum of Education*. Sidney, Australia: Teachers College, Vol. VI, August, 1947, p. 14.

b. Criterion:
Practice teaching marks and scores on certain personality factors, such as: fluency of association, sociability, dominance, cheerfulness, objectivity, carefreeness,and self-confidence.

c. Number of persons studied:
200 men and women in their second year of training at Teachers' College, Sidney (Australia), in 1945.

d. Aspects of teachers or teaching studied:
Teaching efficiency at the primary level as indicated by scores on the following factors: fluency of association, cheerfulness, dominance, objectivity, carefreeness, self-confidence, perseveration, cooperation, agreeableness, nervous tenseness, general pressure for activity, masculinity-femininity, Educational Psychology test (available only at end of first year's training), Education examination at the end of first year, intelligence test.

e. Data-gathering devices:
1. Supervisors' written reports on which teaching marks were based; 2. The Guilford and Martin Inventories; 3. Cattell's tests of perseveration and fluency; 4. College records.

f. Results:
A preliminary examination of scores revealed significant differences between the best and worst teachers on only two variables, namely the Education examination and I. Q. It seems that students are better teachers if they know something about the psychology of learning and motivation, and the principles of teaching. The very worst teachers were more intelligent than the very best (S. E. of the difference was two and a half times the mean difference). The general trend showed that the better teachers tended to be more self-confident, tolerant and dominant, while the poorer ones tended to be uncooperative, over-critical and socially passive.

Out of all the variables studied the Educational Psychology score correlates highest with the teaching mark variable, yielding an r of .50.

To predict teaching success of incoming students, omitting the Educational Psychology variable, the r was .47.

TABLE VI—Continued

Summary Number 7 (70)

a. Reference:
Lawton, J. A. "A Study of Factors Useful in Choosing Candidates for the Teaching Profession." *British Journal of Educational Psychology*, 9:131–44, June, 1939.

b. Criterion:
General teaching (practice teaching) grades.

c. Number of persons studied:
Two groups of 45 each.

d. Aspects of teachers or teaching studied:
Academic attainment, voice, appearance, lucidity of expression, brightness, interest in affairs, interest in games, ability at games, interest in social affairs, leadership qualities, sense of humor, kindness, tact, industry, determination.

e. Data-gathering devices:
Academic attainment as assessed by examinations; voice, appearance, lucidity of expression, brightness, interest in affairs, as assessed by interview; interest in games, ability at games, interest in social affairs, leadership quality, as assessed by the student group; sense of humor, kindness, tact, industry, determination, as assessed by the Hostel tutor.

f. Results:
The correlations obtained for the total score on the completed form and general teaching grade in the final experiment were as follows:

| | | |
|---|---|---|
| Group A | 45 students | .70 |
| Group B | 45 students | .82 |

Summary Number 8 (71)

a. Reference:
Laycock, Sam R. "The Bernreuter Personality Inventory in the Selection of Teachers." *Educational Administration and Supervision*, 20:59–63, January, 1934.

b. Criterion:
Instructors' ratings.

c. Number of persons studied:
80 first year graduate students of the college of education, University of Saskatchewan, Saskatoon, Canada.

d. Aspects of teachers or teaching studied:
Neurotic tendency, Self sufficiency, Introversion-Extroversion, Dominance-Submission.

e. Data-gathering devices:
Three professors, all with long experience in teacher training, spent their whole time in the classrooms of the student-teachers evaluating their teaching efficiency. Each professor made several visits. The regular classroom teachers rated each student-teacher on a carefully prepared rating scale.

f. Results:
Correlations of practice teaching marks with:

| | |
|---|---|
| Neurotic tendency | —.21 |
| Self sufficiency | .05 |
| Introversion–extroversion | —.14 |
| Dominance–submission | .33 |

Results of Comparison of Top Quartile Group in Practice Teaching with Bottom Quartile Group in Practice Teaching

| | Top Quartile Mean | PE | Bottom Quartile Mean | PE | Difference | C.R. |
|---|---|---|---|---|---|---|
| Neurotic tendency | 52.0 | 3.55 | 60.75 | 3.98 | 8.75 | 7.35 |
| Self sufficiency | 53.1 | 3.24 | 47.8 | 3.42 | 5.3 | 5.0 |
| Introversion | 48.4 | 4.01 | 53.5 | 3.8 | 5.1 | 4.14 |
| Dominance | 53.05 | 3.04 | 33.15 | 3.55 | 19.90 | 19.1 |

Summary Number 9 (82)

a. Reference:
Mead, A. R. and Holley, C. E. "Forecasting Success in Practice Teaching." *Journal of Educational Psychology*, 7:495–97; October, 1916.

b. Criterion:
Success in practice teaching as measured by supervisor ratings.

c. Number of persons studied:
39 practice teachers.

d. Aspects of teachers or teaching studied:
General scholarship, scholarship in major, grades in general methods courses.

e. Data-gathering devices:
School records of grades.

f. Results:

Practice Teaching Success

| | r | N |
|---|---|---|
| General Scholarship | .24 | 39 |
| Scholarship in Major | .19 | 40 |
| General Methods Course Marks | .57 | 40 |

Summary Number 10 (84)

a. Reference:
Morris, Elizabeth Hunt. *Personal Traits and Success in Teaching*, Contributions to Education, No. 342. New York: Teachers College, Columbia University, 1929.

b. Criterion:
Grades in practice teaching.

c. Number of persons studied:
60 college seniors.

d. Aspects of teachers or teaching studied:
Academic averages, health, practice teaching grades, prejudice, sympathy, intelligence, leadership, emotional makeup, personal qualities.

e. Data-gathering devices:
Health ratings by college physician
Otis Self-Administering Test of Mental Ability (Higher Form)
Watson Public Opinion Test
Personal history blanks
"Sympathy" test, unpublished, designed by members of the faculty at the State College for Teachers, Albany, N. Y.
Chassell-Watson "Emotional History Record"

TABLE VI—Continued

f. Results:

Correlations

| | |
|---|---|
| 1. Academic average and practice teaching | .55 |
| 2. Practice teaching and trait index | .51 |
| 3. Academic average and trait index | .34 |
| 4. Intelligence and public opinion (i.e., prejudice) | —.33 |
| 5. Academic average and prejudice | —.24 |
| 6. Intelligence and practice teaching | —.23 |
| 7. "Sympathy" and Trait Index | .22 |
| 8. Intelligence and "sympathy" | —.20 |
| 9. Health and prejudice | —.18 |
| 10. Academic average and health | .17 |
| 11. Academic average and intelligence | .16 |
| 12. Practice teaching and "sympathy" | .16 |
| 13. Health and Trait Index | .16 |
| 14. Prejudice and Trait Index | —.12 |
| 15. Practice teaching and prejudice | —.12 |
| 16. Intelligence and Trait Index | —.10 |
| 17. Health and Practice teaching | .10 |
| 18. Academic average and "sympathy" | .08 |
| 19. Health and intelligence | —.06 |
| 20. Health and "sympathy" | —.06 |
| 21. Prejudice and "sympathy" | .04 |

Summary Number 10a (91d)

a. Reference:
Porter, William A. "Pupil Evaluation of Practice Teaching." 35:700–704, May, 1942.

b. Criterion:
Pupil ratings of practice teachers.

c. Number of persons studied:
Twenty-seven practice teachers.

d. Aspects of teachers or teaching studied:
Appearance, professional manner, personal qualities, teaching methods, and command of subject.

e. Data-gathering devices:
A pupil check list.

f. Results:
1. Supervisory rating can be made more objective by the use of pupil ratings.
2. Student teachers are pleased to have the evaluation of pupils of their efforts.
3. The value of the procedure seems to lie in the detailed inventory of the strengths and weakness of student teachers.
4. Some classes are consistently more lenient than others.
5. Individuals receiving a high or low average score tend to have a smaller range of score than those whose average score falls in the middle group. That is, the pupils agree closely in their judgment of the best and poorest practice teachers but vary widely in their judgment of the middle group.
6. In a few cases where the date is available the pupil judgments show a close agreement with the results of the application of the Barr–Harris Teaching Scale.

Summary Number 11 (104)

a. Reference:
Seagoe, M. V. "Standardized Tests in the Pre-Training Selection of Teachers." *Journal of Educational Research*, 36:678–93, May, 1945.

b. Criterion:
Ratings on the University of California Rating Scale for Practice Teaching.

c. Number of persons studied:
87 college students chosen from a group of 125.

d. Aspects of teachers or teaching studied:
Intelligence, art judgment, musical talent, mechanical ability, general academic achievement, general culture, knowledge of contemporary affairs, personality and adjustment, temperament, interest in teaching, values, social attitudes, leadership, teaching aptitude.

e. Data-gathering devices:
American Council Psychological Examination; MacQuarrie Test for Mechanical Ability; Meier Art Judgment Test; Seashore Test of Musical Talent; Cooperative General Achievement Test; Cooperative General Culture Test; Cooperative Contemporary Affairs Test; Thurstone Personality Schedule; Willoughby Emotional Maturity Scale; Bell Adjustment Inventory; Humm–Wadsworth Temperament Scale; Bernreuter Personality Inventory; Strong Vocational Interest Blank; Vernon–Allport Study of Values; Harper Test of Social Attitudes; Morris Trait Index L; Coxe–Orleans Teaching Prognosis Test; George Washington University Teaching Aptitude Test; Stanford Educational Aptitudes Test.

f. Results:
1. Student planning to become elementary teachers are highly selected in the linguistic factor, in intelligence, in general culture, in knowledge of contemporary affairs, in promise in education courses, and in general teaching aptitude.
2. Students planning to become elementary teachers are somewhat selected in the qualitative aspects of intelligence, in manipulative skill, in musical talent, in social studies achievement, in freedom from egoistic attachments, in general mental health, in self-confidence, in general adjustment, in femininity, in interest in teaching, in social, political, and religious values, and in leadership.
3. Students planning to become elementary teachers are relatively unselected in artistic discrimination, in science and mathematic achievement, in freedom from neurotic tendencies, in sociability, in liberalism, and in aptitude for teaching in comparison to administration or research.

Summary Number 12 (103)

a. Reference:
Seagoe, M. V. "Prognostic Tests and Teaching Success." *Journal of Educational Research*, 38: 685–90, May, 1945.

b. Criterion:
Ratings on University of California Rating Scale for Practice Teaching.

c. Number of persons studied:
31 college students.

d. Aspects of teachers or teaching studied:
Art judgment, musical talent, mechanical ability, intelligence, knowledge of contemporary affairs, general academic achievement, general culture, temperament, adjustment, personality, emotional maturity, interest in teaching, values, social attitudes, leadership, teaching aptitudes.

e. Data-gathering devices:
See summary of results.

TABLE VI—Continued

f. Results:

Test Score and Average Teaching Rating

| Area | Test | | N | r |
|---|---|---|---|---|
| Intelligence and Special Abilities | Macquarrie Test for Mechanical Ability | | 31 | .31 |
| | Meier Art Judgment Test | | 31 | .21 |
| | Seashore Test of Musical Talent: Median | | 31 | —.14 |
| | American Council Psychological Examination: Gross | | 31 | .12 |
| Achievement | Cooperative General Achievement Test: Mathematics | | 31 | .14 |
| | | Natural Science | 31 | .10 |
| | | Social Studies | 31 | .02 |
| | Cooperative Contemporary Affairs Test, 1941 | | 31 | .04 |
| | Cooperative General Culture Test | | 31 | —.02 |
| Personality | Humm–Wadsworth Temperament Scale: Qualitative Estimate | | 22 | .63 |
| | | No-Count | 31 | .30 |
| | Bell Adjustment Inventory, Adult Form, Total | | 31 | —.40 |
| | Bernreuter Personality Inventory: F1-C | | 31 | —.38 |
| | | F2-S | 31 | —.06 |
| | Thurstone Personality Schedule | | 31 | —.36 |
| | Willoughby Emotional Maturity Scale | | 31 | .19 |
| | Strong Vocational Interest Blank: M-F | | 31 | .08 |
| Attitudes and Interests | Vernon–Allport Study of Values: Economic | | 31 | —.33 |
| | | Political | 31 | .25 |
| | | Aesthetic | 31 | —.02 |
| | | Social | 31 | —.01 |
| | | Religious | 31 | .01 |
| | | Theoretical | 31 | .00 |
| | Harper Test of Social Attitudes | | 31 | .06 |
| | Strong Vocational Interest Blank: Teacher, Elementary | | 31 | .06 |
| | (For Women) | Housewife | 31 | —.01 |
| Teaching Prognosis | Morris Trait Index L | | 31 | .44 |
| | Coxe–Orleans Teaching Prognosis Test | | 31 | .36 |
| | George Washington University Teaching Aptitude Test | | 31 | .19 |
| | Stanford Educational Aptitudes Test: A-R | | 31 | .19 |
| | | T-R | 31 | .09 |
| | | T-A | 31 | —.01 |

## Summary Number 13 (112)

a. Reference:
Smalzried, N. T. and Remmers, H. H. "A Factor Analysis of the Purdue Rating for Instructors." *Journal of Educational Psychology*, 34:363–367, September, 1943.

b. Criterion:
No outside criteria.

c. Number of persons studied:
40 practice teachers.

d. Aspects of teachers or teaching studied:
See summary of results.

e. Data-gathering devices:
Purdue Rating Scale for Instructors.

f. Results:
Two factors were found to account for the table of intercorrelations:

Factor I—Empathy Trait (The ability and willingness to wear each student's "sensorial and emotional shoes")

Factor II—Professional Maturity Trait (In its nicest meaning, could include a classroom containing no pupils—just a teacher)

Factor Loadings

| Item | Factor I | Factor II | Communality |
|---|---|---|---|
| 1. Interest in subject | .76 | .43 | .76 |
| 2. Sympathetic attitude toward students | .29 | .77 | .67 |
| 3. Fairness in grading | .28 | .88 | .83 |
| 4. Liberal and progressive attitude | .40 | .78 | .69 |
| 5. Presentation of subject matter | .89 | .22 | .84 |
| 6. Sense of proportion and humor | .69 | .46 | .69 |
| 7. Self-reliance and confidence | .89 | .18 | .82 |
| 8. Personal peculiarities | .72 | .53 | .80 |
| 9. Personal appearance | .17 | .79 | .64 |
| 10. Stimulating intellectual curiosity | .67 | .44 | .64 |

## Summary Number 14 (113)

a. Reference:
Snyder, Agnes. "The Value of Certain Measurements in the Training of Teachers." *John Hopkins University Studies in Education*, No. 9. Baltimore: John Hopkins University, 1928.

b. Criterion:
Grades in student teaching; experimental and control groups.

c. Number of persons studied:
743 pupils in 23 classes taught by 158 student teachers.

d. Aspects of teachers or teaching studied:
Teaching techniques; Teacher efficiency.

e. Data-gathering devices:
The I. E. R. Intelligence Test.

f. Results:
There is indication that there is some value in teaching students to use the results of general and diagnostic tests in their instruction of children, but the data suggest that there may be varying degrees of value in the different subjects tested, namely; reading, spelling, arithmetic calculation, and arithmetic problem solution.

## Summary Number 15 (126)

a. Reference:
Tudhope, William B. "A Study of the Training College Final Teaching Mark as a Criterion of Future Success in the Teaching Profession. Part I." *The British Journal of Educational Psychology*, 12:167–71, November, 1942.

b. Criterion:
Each student is visited at least once by each of the following: college supervisor, head of the school, head of the college education department

TABLE VI—Continued

and one of His Majesty's Inspectors; thereafter they get together and an assessment of the student's worth is given which is his final teaching mark.

c. Number of persons studied:
96 teachers (50 men and 46 women).

d. Aspects of teachers or teaching studied:
Efficiency as a student teacher.

e. Data-gathering devices:
See remarks on criterion.

f. Results:
Correlations between the final student teaching mark assigned by His Majesty's Inspector after the teacher concerned had been teaching for at least three years:

| | |
|---|---|
| Men | .84 |
| Women | .77 |
| Both | .81 |

*II. Studies using supervisory in service ratings of teaching efficiency as the criterion*

Summary Number 1 (5a)

a. Reference:
Anderson, H. J. "Correlation Between Academic Achievement and Teaching Success", *Elementary School Journal*, 32:22–29, September, 193?.

b. Criterion:
In-service supervisory ratings.

c. Number of persons studied:
529 teachers.

d. Aspects of teachers or teaching studied:
Scholarship.

e. Data-gathering devices:
Grades in college and high school.

f. Results:

Correlations of Superintendents' Ratings of Teaching Success with High School and College Scholarship

| Group | Teaching success and high school scholarship | Teaching success and college scholarship |
|---|---|---|
| 480 graduates not holding degrees | .10 | .19 |
| 110 graduates holding degrees | .22 | .21 |
| All graduates | .12 | .19 |

Summary Number 2 (7)

a. Reference:
Barr, A. S. *Characteristic Differences in the Teaching Performance of Good and Poor Teachers of the Social Studies*, Public School Publishing Company, Bloomington, Illinois, 1929.

b. Criterion:
In-service supervisory ratings.

c. Number of persons studied:
Forty-seven good teachers; forty-seven poor teachers.

d. Aspects of teachers or teaching studied:
Teaching techniques, behavior patterns.

e. Data-gathering devices:
Observation, time records, stenographic reports, check lists and questionnaires.

f. Results:
The most frequent practices of good teachers of the social studies are summarized as follows: (The various frequencies attached to each are indicated in parentheses.)

1. A good teacher of the social studies motivates her work (47)
2. She has good discipline (47)
3. She stands throughout the greater part of the class period (47)
4. She attends carefully to pupil responses (46)
5. She makes frequent use of illustrative materials (36)
6. She employs some system of appraisal other than teacher appraisal (33)
7. She shows superior knowledge of subject matter (35)
8. She smiles appreciatively (32)
9. She is patient (32)
10. She follows a topical organization and assignment of subject matter (32)
11. She requires notebooks and outside reading (31)
12. She laughs with the class from time to time (31)
13. She conducts class discussions in a conversational manner (25)
14. She has a well established procedure for examinations (28)
15. She is enthusiastic (28)
16. She makes frequent use of pupils' experiences (24)
17. She possesses a wealth of commentary expressions (22)
18. She is pleasant (22)
19. She asks many thought questions and employs a good teachnique in the process (21)
20. She makes some provision for individual differences (19)
21. She socializes class discussions (16)
22. She provides definite directions for study (11)
23. She possesses a good sense of humor (10)

Summary Number 3 (13)

a. Reference:
Bliss, W. B. "How Much Mental Ability Does A Teacher Need?" *Journal of Educational Research*, 6:33–41; June, 1922.

b. Criterion:
Supervisory ratings.

c. Number of persons studied:
One-thousand-three-hundred and five students in County Normal Schools.

d. Aspects of teachers or teaching studied:
Teachers' mental abilities.

e. Data-gathering devices:
National Intelligence Test, Otis Intelligence Test, Stanford Binet Test, Terman Test.

f. Results:

Relationship Between Mental Ratings and Success Ratings

| Mental ratings | Excellent or superior | Good or Higher | Fair or poor |
|---|---|---|---|
| Low (5) | 14* | 71 | 29 |
| Medium (3) | 31 | 75 | 25 |
| High (1) | 61 | 90 | 10** |

*None superior.
**None poor.

TABLE VI—Continued

Summary Number 4 (16)

a. Reference:
Boardman, Charles W. *Professional Tests as Measures of Teaching Efficiency in High School.* Contributions to Education, No. 327. New York: Teachers College, Columbia University, 1928, 85 pp.

b. Criterion:
The average sigma position ranks of teachers based upon the judgments of three groups of supervisors, associate teachers, and pupils.

c. Number of persons studied:
Eighty-eight high school teachers.

d. Aspects of teachers or teaching studied:
Age, experience, intelligence, professional information, teaching techniques.

e. Data-gathering devices:
Psychological Examination for High School Graduates and College Freshmen, 1926 edition. American Council on Education, Wash., D. C., A Test of Professional Information (Devised for the study), A Test of Ability to Discriminate Between Procedures Proposed as Solutions of Classroom Problems in High School (Devised for the study).

f. Results:

Raw Score Correlations Between the Measures and the Criterion

| | |
|---|---|
| Age | .34 |
| Experience | .38 |
| Psychological Test | .33 |
| Professional Information Test | .26 |
| Procedures Test | .28 |

Summary Number 5 (17a)

a. Reference:
Bossing, Nelson L. "Teacher-Aptitude Tests and Teacher Selection", *Research in Higher Education.* United States Office Bulletin, 1931, No. 12, 1932, pp. 117–33.

b. Criterion:
In-service supervisory ratings.

c. Number of persons studied:
One hundred sixty-five teachers.

d. Aspects of teachers or teaching studied:
Ability as instructor, success in discipline, industry, personal appearance, character, personality, health, loyalty and cooperation, attitude toward community, grades—academic, cadet teaching, professional.

e. Data-gathering devices:
Rating scales, and school records.

f. Results:
Following is a composite rating of the part each of the nine items on the rating form played in the total ranking the judges gave the teacher.

| | | | |
|---|---|---|---|
| Ability as instructor | .78 | Personal appearance | .19 |
| Success in discipline | .29 | Health | .30 |
| Industry | .21 | Loyalty and cooperation | .19 |
| Character | .04 | Attitude toward community | .06 |
| Personality | .07 | | |

Correlations between the criterion and

| | |
|---|---|
| Cadet teaching grades | .69 |
| Professional educational grades | .19 |
| Academic other than professional | .19 |

Summary Number 6 (20)

a. Reference:
Boyce, A. C. "Qualities of Merit in Secondary School Teachers", *Journal of Educational Psychology*, 3:144–57; March, 1912; also, "A Method for Guiding and Controlling the Judging of Teaching Efficiency", *School Review Monographs*, No. 6, University of Chicago, 1915, pp. 71–82; and "Methods of Measuring Teachers' Efficiency", in the *Fourteenth Yearbook of the National Society for the Study of Education*, Part I, Public School Publishing Company, Bloomington, Ill., 1915.

b. Criterion:
Superintendents' and principals' ratings.

c. Number of persons studied:
Correlations based on 310 to 421 ratings of secondary school teachers.

d. Aspects of teachers or teaching studied:
Subjects taught, preparation, experience and a list of qualities.

e. Data-gathering devices:
A list of qualities taken from a list proposed by Prof. E. C. Elliott, then of the University of Wisconsin.

f. Results:

Qualities of Merit Correlated with Years of Experience

| | r |
|---|---|
| **General Merit and Physical** | |
| 1. General Appearance | .36 |
| 2. Health | .18 |
| 3. Voice | .50 |
| 4. Energy and endurance | .51 |
| **Moral** | |
| 1. Self control | .52 |
| 2. Sympathy | .45 |
| 3. Adaptability | .59 |
| 4. Sense of humor | .44 |
| 5. Fair mindedness | .45 |
| **Administrative** | |
| 1. Initiative | .62 |
| 2. Executive capacity | .62 |
| 3. Cooperation | .66 |
| **Dynamic** | |
| 1. Intellectual capacity | .71 |
| 2. Instructional skill | .90 |
| 3. Governmental skill (discipline) | .67 |
| 4. Studiousness | .65 |
| **Achievement** | |
| 1. Success of pupils (results) | .85 |
| 2. Stimulation of individuals | .80 |
| 3. Stimulation of community | .52 |
| **Social Spirit** | |
| 1. Interest in life of school | .64 |
| 2. Interest in life of community | .57 |
| 3. Experience | .43 |
| **Instructional Skill Correlated with:** | |
| Intellectual capacity | .65 |
| Studiousness | .61 |
| Adaptability | .53 |
| Experience | .40 |
| **Success of Pupils Correlated with:** | |
| Instructional skill | .86 |
| Discipline | .74 |
| Intellectual capacity | .69 |
| Adaptability | .55 |
| Sympathy Test | .51 |
| Experience | .50 |

Summary Number 7 (20a)

a. Reference:
Breckenridge, Elizabeth. "A Study of the Relation of Preparatory School Records and Intelligence Test Scores to Teaching Success". *Educational Administration and Supervision*, 17 (December, 1931) pp. 649–60.

TABLE VI—Continued

b. Criterion:
In-service supervisory ratings; grades student teaching.

c. Number of persons studied:
420 college students; 215 teachers in field.

d. Aspects of teachers or teaching studied:
Intelligence, scholarship.

e. Data-gathering devices:
Army Alpha Test; Secondary school marks; Normal School subject matter marks; Student teaching grades; and, Cadet teaching grades.

f. Results:

Correlations

| | Rated teaching ability | Grades student teaching |
|---|---|---|
| With intelligence | .07 | .09 |
| With scholarship | .35 | .26 |

Summary Number 8 (22)

a. Reference:
Brookover, Wilbur B. "Person-Person Interaction Between Teachers and Pupils and Teaching Effectiveness". *Journal of Educational Research*, 34: 272–87, December, 1940.

b. Criterion:
Pupil and administration ratings.

c. Number of persons studied:
Thirty-nine high school teachers.

d. Aspects of teachers or teaching studied:
Teacher-pupil relationships.

e. Data-gathering devices:
Rating Scale for Person-Person Interaction Applied to Teacher-Pupil Relationship by Brookover, Purdue Rating Scale for Instructors—(Two items were added at the end to make the scale more applicable to high school teachers, and the scale line was reduced from 100 to 50 units).

f. Results:
Teachers who have a high degree of person-person interaction with their students tend to be rated high as instructors by the same students. $r = .639$
Individual students who have a high degree of person-person interaction with their teachers tend to rate them high as instructors. The 37 coefficients of correlation are all positive and range from insignificant to very high.

Mean of student ratings of a teacher as instructor are not correlated with administrators ratings of the same teacher. $r = .078$

Differences in age, sex, or classification of students made no significant differences either in regard to ratings of person-person interaction or ratings of the teachers as instructors.

Ratings by two administrators of a given teacher on a common scale show an r of .245.

Mean ratings by students show a much closer agreement with means of two administrators ratings. (r is .631 for 12 cases)

The age or sex of teachers has no significant effect on either person-person interaction or the ratings of teachers as instructors. However, women under 30 have a slightly higher degree of person-person interaction with their students than women over 30.

Teachers in smaller rural schools have a higher degree of person-person interaction with their students than do teachers in larger urban schools but the difference is not great.

Students in the larger urban schools rated their teachers slightly higher as instructors than did the students in smaller rural schools.

Summary Number 9 (22a)

a. Reference:
Broom, M. E. "The Predictive Value of Three Specified Factors for Success in Practice Teaching". *Educational Administration and Supervision*, 15 (January, 1929) pp. 25–29.

b. Criterion:
Pre-service ratings.

c. Number of persons studied:
148 teachers.

d. Aspects of teachers or teaching studied:
Intelligence, scholarship, professional knowledge.

e. Data-gathering devices:
College records which included: Marks in educational theory courses; Marks in practice teaching; Thorndike Intelligence Examination; and, Decile ranks on the trade information section of the Thorndike Intelligence Test.

f. Results:
Correlations with rated teaching ability:

| | |
|---|---|
| With intelligence | .30 |
| With trade information | .04 |
| With professional course grades | .21 |

Summary Number 10 (23)

a. Reference:
Bryan, Roy C. "Pupil Ratings of Secondary School Teachers". *School Review*, 46:357–67, May, 1938.

b. Criterion:
Pupil ratings of teachers.

c. Number of persons studied:
29 teachers, each rated by 3 classes of junior high school pupils.

d. Aspects of teachers or teaching studied:
Knowledge of subject; ability to explain clearly; fairness in marking; discipline; sympathy; amount of work that the teacher does; ability to make classes interesting; value of subject; general teaching ability.

e. Data-gathering devices:
Informal rating scale constructed by the author especially for this study.

f. Results:
Six teachers out of 29 received average ratings differing by more than six points which is believed to be significant statistically.
Eleven out of twenty teachers answering the questionnaire felt they had benefited.

Summary Number 11 (37)

a. Reference:
Dodge, Arthur F. "What are the Personality Traits of the Successful Teacher?" *Journal of Applied Psychology*, 27:325–37, August, 1943.

b. Criterion:
Supervisors rating.

TABLE VI—Continued

c. Number of persons studied:
Total 301 subjects. 239 teaching in rapidly expanding air corps. 62 education majors, of these 47 practice teachers in agriculture and 15 practice teachers in home economics.

d. Aspects of teachers or teaching studied:
Personality qualities: (1) social attitude; (2) initiative and leadership; (3) freedom from fears and worries; (4) regard for opinions of others; (5) deliberateness in making decisions.

e. Data-gathering devices:
Occupational Personality Inventory Form S-C, by A. F. Dodge.
Rating scales used by supervisors were unnamed.

f. Results:

Teacher Personality Scores of Better and Poorer Teachers Mean Score

| Air Corps Technical School | N | Better Teachers | Poorer Teachers | Differences in Mean Scores |
|---|---|---|---|---|
| Div. No. 1 | 20 | 48.2 | 39.0 | 9.2 |
| 2 | 20 | 58.8 | 42.8 | 16.0 |
| 3 | 10 | 53.2 | 42.8 | 10.4 |
| 4 | 19 | 49.9 | 42.0 | 7.9 |
| 5 | 20 | 52.2 | 42.8 | 9.4 |
| 6 | 20 | 55.1 | 43.1 | 12.0 |
| 7 | 19 | 54.8 | 46.1 | 8.7 |
| 8 | 19 | 52.7 | 45.7 | 7.0 |
| 9 | 20 | 44.1 | 48.6 | —4.5 |
| 10 | 20 | 51.0 | 38.0 | 13.0 |
| 11 | 20 | 53.0 | 44.5 | 8.5 |
| 12 | 23 | 54.0 | 46.9 | 7.1 |
| Total | 239 | 52.27 | 43.52 | 8.75 |
| Apprentice Ag. Ed. Teachers | 47 | 56.2 | 54.9 | 1.2 |
| Apprentice Home Ec. Teachers | 15 | 54.4 | 50.8 | 3.6 |
| Total Apprentices | 62 | 55.9 | 53.7 | 2.2 |

Summary Number 12 (41)

a. Reference:
Flanagan, John C. "An Analysis of the Results from the First Annual Edition of the National Teacher Examinations." *School and Society*, 54: 59–64, July 26, 1941.

b. Criterion:
Ratings by supervisors and pupils.

c. Number of persons studied:
49 teachers in 22 school systems.

d. Aspects of teachers or teaching studied:
Knowledge of subject, Professional information, General cultural background, Reading comprehension, Reasoning.

e. Data-gathering devices:
National Teacher Examination, Graphic Teacher Rating Scale (Cooperative Test Service), Student's Educational Report Form (Cooperative Test Service)

f. Results:
The product moment correlation coefficient between the total scores made on the common examinations of the National Teacher Examinations and the Ratings of supervisors on over-all judgment of teacher's general effectiveness and desirability is .51.

Summary Number 13 (43)

a. Reference:
Giese, W. J. and Stevens, S. N. "Application Blank Can Be Made Predictive of Teaching Success." *American School Board Journal*, 98:23–25, April, 1939.

b. Criterion:
Personal history data and teaching success as measured by ratings of principals.

c. Number of persons studied:
375 elementary, junior high school and senior high school teachers.

d. Aspects of teachers or teaching studied:
Social effectiveness, stability, and personality patterns.

e. Data-gathering devices:
Ratings of teachers by principals, application forms tabulated and items weighted for personal history data.

f. Results:

| Ratings of personal history on application form in: | Teaching success as measured by principal's ratings r |
|---|---|
| Elementary school | .59 |
| Junior High School | .67 |
| Senior High School | .76 |

Summary Number 14 (46)

a. Reference:
Grieder, Calvin, and Newburn, Harry K. "Temperament in Prospective Teachers." *Journal of Educational Research*, 35:683–93, May, 1942.

b. Criterion:
Interest in teaching; estimated success as teachers; practice teaching marks.

c. Number of persons studied:
281 seniors in the college of education at the State University of Iowa. (186 usable reports used in the study.)

d. Aspects of teachers or teaching studied:
Temperament.

e. Data-gathering devices:
Humm–Wadsworth Temperament Scale.

f. Results:
In the main, the findings of this study are of a negative nature in that no common temperamental element or pattern of components is discoverable in the data for various groupings of student teachers. There is more difference between the sexes than between groups selected on the bases of (a) choice of teaching as a career (b) estimated success as teachers (c) marks in practice teaching. The largest differences show that men tend to score higher than women in the hysteroid component, while women tend to score higher than men in the manic, depressed, and autistic phases.

Summary Number 15 (53)

a. Reference:
Hendrikson, Ernest H. "Comparisons of Ratings of Voice and Teaching Ability." *Journal of Educational Psychology*, 34:121–23, February, 1943.

b. Criterion:
Supervisor's ratings.

c. Number of persons studied:
432–580 teachers of all grade levels.

TABLE VI—Continued

d. Aspects of teachers or teaching studied:
Teachers voice.

e. Data-gathering devices:
Informal rating scale.

f. Results:
Correlation between supervising critics ratings of teachers' voices and the rating of the same teachers' voices by public school supervisors is .20.

Correlation between teaching ability as judged by supervising critics and public school supervisors is .34.

Correlation between teaching ability and voice when both are evaluated by supervising critics, .62 and public school supervisors .58.

Summary Number 16 (54)

a. Reference:
Herda, F. J. "Some Aspects of the Relative Instructional Efficiency of Men and Women Teachers." *Journal of Educational Research*, 29:196–203, November, 1935.

b. Criterion:
Results from Minnesota State Department of Education examinations in various high school subjects. Ratings on qualities on check lists.

c. Number of persons studied:
The ratings were made by 220 Jr. and Sr. high school boys; 343 Jr. and Sr. high school girls; and 67 superintendents of schools. The results on the Minnesota Department of Education Examinations in various Jr. and Sr. high school subjects were for 77 schools.

d. Aspects of teachers or teaching studied:
Sex.

e. Data-gathering devices:
Minnesota State Department Examinations and author made Check Lists.

f. Results:
1. Pupils tend to rate men and women teachers as being about equal on most of the traits listed. Where there is a preference, it is usually in favor of the men, except that women teachers are rated far superior in their ability to exercise a good influence over girls. Boys seem to prefer men teachers, while girls are more apt to express little preference.

2. There is a tendency on the part of superintendents to agree with the pupils that there is no great difference in the ability of men and women teachers. They also agree with the pupils in the opinion that men teachers are apt to be more influential with boys, and women teachers with girls. Men teachers are considered more forceful and business-like and as exhibiting leadership in a greater degree than the women.

3. On the whole, there is no great difference in the efficiency of men or women teachers as judged by the achievements in the state board examinations. The advantage, however, wherever present, is usually in favor of the women teacher. In geography and plane geometry, the women present a decidedly higher level of accomplishment.

Summary Number 17 (56)

a. Reference:
Hult, Esther. "Study of Achievement in Educational Psychology." *Journal of Experimental Education*, 13:174–90, June, 1945.

b. Criterion:
Teaching success measured by composite rating by 5 supervisors and practice teaching mark in minor field.

c. Number of persons studied:
Nineteen teachers at the end of their first year of teaching.

d. Aspects of teachers or teaching studied:
Teaching success and factors related to teaching efficiency.

e. Data-gathering devices:
Henmon–Nelson Test of Mental Ability, Cooperative Reading Comprehension Test: Form C 2, Cooperative General Culture Test: Form Q, Total university grade point average, Course mark in educational psychology, Final examination grade in educational psychology course based on judgment test, Objective test on the text, *Educational Psychology* by Gates and others, Practice teaching associated with the course in educational psychology.

f. Results:
Correlations for the Prediction of Teaching Success with:

| | |
|---|---|
| Henmon–Nelson Test of Mental Ability | —.17 |
| Cooperative Reading Comprehension Test | —.12 |
| Cooperative General Culture Test | —.17 |
| Total university grade point average | .44 |
| Mark in Education 75 | .15 |
| Final examination | .37 |
| Gates Test | .18 |
| Practice teaching in Education 75 | .17 |

Summary Number 18 (58)

a. Reference:
Jacobs, Charles L. *The Relations of the Teacher's Education to Her Effectiveness*. Contributions to Education, No. 277. New York: Teachers College, Columbia University, 1928.

b. Criterion:
Principals' ratings.

c. Number of persons studied:
406 teachers from the first six grades; all had taught not less than five years.

d. Aspects of teachers or teaching studied:
Teachers' effectiveness in the field as related to his education beyond high school.

e. Data-gathering devices:
Rating blanks constructed specially for the purpose. Training and Experience records: (a) identification and date of filing, (b) secondary education, (c) higher education, (d) subjects studied in higher institutions, (e) teaching experience. Teacher Efficiency Rating Card. Principals' Quarterly Reports. Reports of Proficiency Rankings. Rubric Weighting Blanks.

TABLE VI—Continued

f. Results:

Subjects for Which the Critical Ratios were 1.5 or Higher

| Subjects | C.R. of Teachers in Upper Quartile | Subjects | C.R. of Teachers in Lower Quartile |
|---|---|---|---|
| Primary Education | 2.33 | History of Education | 2.74 |
| General Methods | 2.91 | Educational Psychology | 1.71 |
| Practice Teaching | 3.71 | Sociology | 2.21 |
| Constitution | 3.50 | Political Science | 2.22 |
| Manual Training | 6.50 | Drawing | 2.80 |
| Biology | 1.51 | Agriculture | 3.23 |
| Home Economics | 2.22 | Hygiene | 1.65 |
| Gymnasium | 2.57 | Music | 1.76 |

## Summary Number 19 (61)

a. Reference:

Jones, Ronald D. "The Prediction of Teaching Efficiency from Objective Measures." *The Journal of Experimental Education*, 15: 85–99, September, 1946.

b. Criterion:

Supervisory ratings and pupil gain scores.

c. Number of persons studied:

65 teachers located in 36 different schools, teaching in 15 subject areas.

d. Aspects of teachers or teaching studied:

Teaching Efficiency. See list of data gathering devices.

e. Data-gathering devices:

1. Rank in high school graduating class.
2. University grade point average.
3. Henmon–Nelson Test of Mental Ability (College Norms).
4. American Council on Education Cooperative General Culture Test.
5. American Council on Education Cooperative Reading Test, C2.
6. The Bell Adjustment Inventory.
7. The Link Inventory of Activities and Interests.
8. American Council on Education Psychological Examination for College Freshmen.

f. Results:

Correlation Between Measures Used in Predicting Teaching Efficiency and the Criterion

| Measures used in predicting Teaching Efficiency | Supervisory Ratings | Pupil Gain |
|---|---|---|
| Fresh. Soph. G.P.A. | .23 | —.11 |
| Junior Senior G.P.A. | .14 | .05 |
| Bell Adjustment | —.04 | —.27 |
| Link Test | .36 | .07 |
| Final Grade Ed. Methods | .05 | —.08 |
| Mean Grade, Educ. 73, 74, 75 | .40 | .26 |
| High School Rank | .13 | —.22 |
| Student Teaching Grade | —.04 | .13 |
| Four Year G.P.A. | .24 | —.08 |
| General Culture | .03 | —.23 |
| Reading Comprehension | .12 | .13 |
| Teaching Experience | —.07 | .04 |
| State Department Ratings | .59 | —.27 |
| American Council Psych. Examination | .10 | —.26 |
| Guide Sheet "C" | .98 | .17 |
| Henmon–Nelson | .11 | .02 |

## Summary Number 20 (63)

a. Reference:

Knight, F. B. *Qualities Related to Success in Teaching.* Contributions to Education, No. 120. New York: Teachers College, Columbia University, 1922.

b. Criterion:

Supervisors ratings, mutual judgments of the teachers themselves, consensus of pupils' opinions.

c. Number of persons studied:

156 grade and high school teachers who were at work in the public schools of three towns in Massachusetts during school year of 1918–1919.

d. Aspects of teachers or teaching studied:

Intellectual keenness, professional knowledge, normal-school scholarship, age, experience, salary, handwriting, and study while in service.

e. Data-gathering devices:

First section of Thorndike College Entrance Examination, "A Trade Test for Elementary School Teachers" by Knight and Franzen, Thorndike's scale for scoring legibility of handwriting.

f. Results:

Teaching efficiency correlated with:

| | |
|---|---|
| Age | .08 |
| Salary | .35 |
| Experience | .04 |
| Intelligence | .16 |
| Handwriting | .00 |
| Knowledge of techniques as measured by professional test | .61 |
| Study while in service (for credit) | .33 |
| Normal school scholarship | .15 |

## Summary Number 21 (65)

a. Reference:

Kriner, H. L. "Five-Year Study of Teachers' College Admissions." *Educational Administration and Supervision*, 23:192–99, March, 1937.

b. Criterion:

Supervisory ratings.

c. Number of persons studied:

260 freshmen admitted to college: (152 admitted to a two year curriculum and 108 admitted to the four year curriculum).

d. Aspects of teachers or teaching studied:

See last item giving results.

e. Data-gathering devices:

Cumulative records for high school and college.

TABLE VI—Continued

f. Results:

Correlation of First-Year Teacher Success with Various Factors

| Factors | Forty-two students four-year group complete | Ninety-four students two-year group complete | Fifty-five students two-year group former report |
|---|---|---|---|
| 1. Dean's prophecy | .50 | .41 | .58 |
| 2. President's prophecy | .48 | .41 | .52 |
| 3. College science grades | .48 | .47 | .61 |
| 4. College student activities | .46 | .25 | --- |
| 5. Thurstone psychological test | .46 | .35 | .41 |
| 6. All college grades (four years) | .45 | --- | --- |
| 7. College professional grades | .40 | .33 | .47 |
| 8. Student teaching grades | .40 | .34 | .39 |
| 9. High school science grades | .36 | .33 | .41 |
| 10. High school Latin grades | .36 | .45 | .57 |
| 11. Sophomore literary acquaintance test | .33 | .15 | .20 |
| 12. College grades, first two years | .31 | .40 | .49 |
| 13. Cross English test | .31 | .35 | .50 |
| 14. Sophomore English test | .31 | .28 | .40 |
| 15. Sophomore general science test | .30 | .28 | .51 |
| 16. College first semester grades | .30 | .42 | .60 |
| 17. High school rank | .27 | .33 | .36 |
| 18. High school English grades | .27 | .32 | .31 |
| 19. High school mathematics grades | .26 | .35 | .47 |
| 20. College English grades | .23 | .28 | .47 |
| 21. Sophomore general culture test | .22 | .25 | .30 |
| 22. College social studies grades | .13 | .22 | .36 |
| 23. High school social studies grades | .13 | .21 | .36 |

Summary Number 22 (73)

a. Reference:

Lins, Lee Joseph. "The Prediction of Teaching Efficiency." *The Journal of Experimental Education*, 15:2–60, Sept. 1946.

b. Criterion:

Composite of five supervisory ratings: pupil evaluations of the teacher, and residual pupil gain.

c. Number of persons studied:
Fifty-eight women teachers in Wisconsin schools.

d. Aspects of teachers or teaching studied:
High school rank, intelligence, home background, personality, interests in teaching, special skills and abilities, general skills, university grade point averages, predicted teaching ability according to ratings made by experts. For further breakdown see summary findings.

f. Results:

Correlations of factors used in predicting teacher efficiency and the several criteria:

| Factors | M-Blank Ratings | Pupil Evaluations | Pupil Gain |
|---|---|---|---|
| High school rank | .33 | .06 | .69 |
| Comp. Hen–Nelson (H. S. and Col.) | .15 | —.25 | .04 |
| H. S. Henmon–Nelson | .14 | --- | --- |
| College Henmon–Nelson | .14 | --- | --- |
| H. S. Prin. Prediction | .46 | --- | --- |
| H. S. Personality Rating, Affect of Appearance and Manner | .23 | --- | --- |
| H. S. Personality Rating, Needs Prodding | .27 | --- | --- |
| H. S. Personality Rating, Do others do what he wishes? | .15 | --- | --- |
| H. S. Personality Rating, Control of Emotions | .20 | --- | --- |
| H. S. Personality Rating, Definite Purpose | .48 | --- | --- |
| Comp. H. S. Personality Rating | .34 | --- | --- |
| Interest in Teaching | .27 | --- | --- |
| Cooperative English Test | .22 | —.32 | .01 |
| Am. Council Psychological | .24 | —.12 | —.01 |
| Cooperative General Culture | .05 | --- | .23 |
| Cooperative Reading | .24 | —.34 | .10 |
| National Teachers Examination | —.15 | —.30 | .45 |
| Predicted G.P.A. | .34 | —.06 | .19 |
| Freshman G.P.A. | .29 | --- | --- |
| Sophomore G.P.A. | .33 | --- | --- |
| Four Year G.P.A. | .31 | .03 | .53 |
| Major G.P.A. | .23 | .05 | .55 |
| Minor G.P.A. | .35 | .01 | .44 |
| Education G.P.A. | .27 | .13 | .52 |
| Practice Teaching | .28 | .06 | .21 |
| Speech Course G.P.A. | .07 | --- | --- |
| Predi. Dir. of Learning | .49 | --- | --- |
| Obj. Data Prediction | .47 | --- | --- |
| Personal Data Prediction | .27 | .28 | —.02 |
| Major Dept. Prediction | .38 | .08 | .13 |
| Professional Judgment (Comp. Two Interview Ratings) | .33 | .11 | .26 |
| Social (two Interview Ratings) | .14 | .12 | .17 |
| Work Habits (Two Interview Ratings) | .22 | .00 | .17 |
| Motivation and Values (Two Interview Ratings) | .33 | .06 | .25 |
| Originality, Creativity, Initiative (Two Interview Ratings) | .17 | —.08 | .17 |
| General Impressions (Two Interviews) | .42 | .29 | .41 |
| Comp. of Six Preceding Items | .31 | .07 | .31 |
| Comp. Director of Learning (Performance, Guide Sheet C) | .51 | --- | --- |
| Comp. Counsellor (performance) | .67 | --- | --- |
| Composite Member School Staff | .56 | --- | --- |
| Composite of Total Performance Rat. | .80 | --- | --- |
| Composite Evaluation of Situation | —.34 | —.31 | --- |

TABLE VI—Continued

e. Data-gathering devices:
1. Henmon–Nelson Test of Mental Ability.
2. American Council on Education Cooperative English Test. Usage (Spelling and Vocabulary).
3. American Council on Education Psychological Examination for College Freshmen.
4. National Teacher's Examination.
5. Wisconsin Adaptation of the M Blank.
6. Barr–Harris, Teacher's Performance Record.
7. University of Wisconsin Application Blank.
8. Cooperative General Culture Test.
9. Grade point average.
10. Cooperative English Test, C2.
11. Student data booklet.
12. Autobiographies.
13. Interviews.
14. Personality ratings.

Summary Number 23 (83)

a. Reference:
Meriam, Junius L. *Normal School Education and Efficiency in Teaching*. Contributions to Education, No. 1. New York: Teachers College, Columbia University 1905, 152 pp.

b. Criterion:
Normal school principals' estimates of teachers' effectiveness.

c. Number of persons studied:
1185 elementary teachers from five normal schools of New York and Massachusetts.

d. Aspects of teachers or teaching studied:
The relation between teaching efficiency and scholarship in various subjects pursued in preparation for teaching.

e. Data-gathering devices:
Data was secured from records at the various normal schools. Normal school principals' estimates. Grades.

f. Results:

| Subjected correlated with Teaching | Schools A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1. Psychology | .33 | .42 | .00 | .00 | .55 | ... | ... | ... |
| 2. Hist. and Prin. of Ed. | .21 | .37 | —.04 | .23 | .50 | —.14 | ... | ... |
| 3. "Professional" | .27 | .43 | .02 | .24 | .57 | ... | ... | .00 |
| 4. Practice Teaching | .44 | ... | .10 | .45 | ... | .47 | ... | .03 |
| 5. Mathematics | | | | | | | | |
| Methods | .22 | .25 | —.12 | .01 | .31 | .28 | ... | .08 |
| Academic | ... | .29 | —.02 | .05 | ... | ... | ... | ... |
| Preparatory Exam. | ... | ... | ... | ... | ... | ... | ... | .11 |
| 6. Science | | | | | | | | |
| Methods | .36 | .27 | ... | .13 | .40 | .02 | ... | .04 |
| Academic | ... | .22 | .01 | .14 | ... | ... | ... | ... |
| Preparatory Exam. | ... | ... | ... | ... | ... | ... | ... | .27 |
| 7. History | | | | | | | | |
| Methods | .004 | .38 | ... | —.13 | .35 | ... | ... | .01 |
| Academic | ... | .44 | .05 | .12 | ... | ... | ... | ... |
| Preparatory Exam. | ... | ... | ... | ... | ... | ... | ... | .21 |
| 8. English | | | | | | | | |
| Methods | .35 | .47 | .03 | .14 | .45 | .30 | ... | .04 |
| Academic | ... | .38 | —.12 | .15 | ... | ... | ... | ... |
| Preparatory Exam. | ... | ... | ... | ... | ... | ... | ... | —.03 |
| 9. Modern Language | ... | ... | ... | ... | ... | ... | ... | .11 |
| Methods | .29 | .42 | —.03 | .14 | .47 | .24 | ... | .09 |
| Academic | ... | .42 | .01 | .04 | ... | ... | ... | .21 |
| 10. Practice Teach. Meth. | .25 | ... | .05 | .29 | ... | .37 | ... | ... |
| 11. Practice Teach. Acad. | ... | ... | —.02 | .25 | ... | ... | ... | ... |
| 12. General Average | ... | ... | ... | ... | ... | ... | ... | —.09 |
| 13. Art | ... | ... | .03 | ... | .23 | ... | ... | ... |
| 14. Manual Training | ... | ... | —.11 | ... | .32 | ... | ... | ... |
| 15. Gymnasium | ... | ... | ... | ... | .33 | ... | ... | ... |
| 16. City Examination | | | | | | | | |
| History and Principles | ... | ... | ... | ... | ... | ... | —.08 | —.22 |
| Methods | ... | ... | ... | ... | ... | ... | —.02 | .16 |
| Total (Exam.) | ... | ... | ... | ... | ... | ... | —.00 | —.05 |

Summary Number 24 (85)

a. Reference:
Morton, R. L. "Qualities of Merit in Secondary Teachers." *Educational Administration and Supervision*, 5:225–38, May, 1919.

b. Criterion:
Pupil reaction as rated by a high school inspector.

c. Number of persons studied:
222 secondary teachers: 151 rural and village; 71 city school teachers.

d. Aspects of teachers or teaching studied:
Personality, scholarship, method, pupil reaction, room conditions, and salary.

e. Data-gathering devices:
Inspector's Score Card developed in the Ohio Department of Public Instruction.

f. Results:
Relationships found between:

| Pupil Reaction and | Personality | Scholarship | Method |
|---|---|---|---|
| All Cities | .56 | .60 | .81 |
| All Counties | .55 | .45 | .66 |

| Salaries and | Personality | Scholarship | Method | Pupil Reaction | Total |
|---|---|---|---|---|---|
| Cities | .28 | .22 | .16 | .24 | .25 |
| Counties | .26 | .31 | .39 | .32 | .40 |

Summary Number 25 (89)

a. Reference:
Odenweller, A. L. *Predicting the Quality of Teaching*. Contributions to Education. New York: Teachers College, Columbia University, 1936.

b. Criterion:
Efficiency in teaching as ranked by principals, assistants, and supervisors.

c. Number of persons studied:
560 teachers who comprised one fifth of the elementary teachers in Cleveland and approximately one half of the graduates of the two year course of the Cleveland School of Education for a seven year period.

TABLE VI—Continued

d. Aspects of teachers or teaching studied:
Scholarship, personal fitness, age, height, weight, height-weight ratio, quality of hand writing, teaching efficiency, and intelligence.

e. Data-gathering devices:
College marks, instructors ratings, principal and supervisory ratings, records: age, height, weight, height-weight ratio, experience, intelligence, hand writing scale.

f. Results:

The Relation of Certain Traits to Teaching Effectiveness

| Trait | Correlation |
|---|---|
| Personality (by principals and supervisors) | .88 |
| Personality (by three teachers of the building) | .58 |
| Fitness–Personality (Combined marks by faculty and student-teaching supervisors) | .30 |
| College marks | .29 |
| Subject matter marks | .28 |
| Personal fitness (by college faculty) | .27 |
| Education marks | .26 |
| Personality (by student teaching supervisors) | .25 |
| Education and student teaching marks | .23 |
| Theory marks (in student teaching) | .21 |
| Technique marks (in student teaching) | .21 |
| Practical arts marks | .21 |
| Student teaching marks | .19 |
| Psychology marks | .16 |
| Age | .15 |
| Experience | .15 |
| Additional courses marks (beyond two-year course) | .11 |
| Handwriting (ranked for effectiveness in teaching) | .08 |
| Height | .08 |
| High school marks | .08 |
| Handwriting (ranked for quality) | .06 |
| Letters in signature | .06 |
| Intelligence (high scores) | —.04 |
| Height–weight ratio | —.02 |
| Weight | .02 |
| Intelligence (median scores) | —.004 |
| Correlation Ratio | |
| Absence due to personal illness | .20 |
| Additional hours (beyond two-year course) | .19 |

Summary Number 26 (90)

a. Reference:
Payne, E. George. "Scholarship and Success in Teaching." *Journal of Educational Psychology*, 9:217–19, April, 1918.

b. Criterion:
Teacher's grades of Normal School students and principal's evaluation of the same people as teachers.

c. Number of persons studied:
Apprentices, 359; temporary substitutes, 295; permanent substitutes, 295; teachers, 144.

d. Aspects of teachers or teaching studied:
Scholarship and success in teaching.

e. Data-gathering devices:
Grades given while attending Normal School and ratings given while apprentices or on the job.

f. Results:
Findings expressed as per cent of excellent, good, and medium teachers from highest, middle, and lowest third of class. The upper and middle thirds were slightly better teachers.

Summary Number 27 (91a)

a. Reference:
Phillips, Wendell Sharman. *An Analysis of Certain Characteristics of Active and Prospective Teachers.* George Peabody College for Teachers, Nashville, Tennessee, 1935.

b. Criterion:
Supervisory ratings.

c. Number of persons studied:
173 active teachers; 151 student teachers.

d. Aspects of teachers or teaching studied:
Intelligence, scholarship, study habits, adjustment, teaching aptitudes, leadership, occupational interests, socio economic status.

e. Data-gathering devices:
Ohio State University Psychological Examination; Wrenn Study-habits Inventory; Coxe–Orleans Prognosis Test of Teaching Ability; Morris Trait Index L; Moss–Hunt Teaching Aptitude Test; Strong Vocational Interest Blank; Manson Occupational Inventory Blank; Sims Socio-Economic Status; Bernreuter Personality Inventory; and, Bell Adjustment Inventory.

f. Results:

Zero Order Correlations of Active Teachers

| | Averaged Rating | Sigma Score Ratings |
|---|---|---|
| 1. Intelligence | .33 | .26 |
| 2. Teaching prognosis | .16 | .28 |
| 3. Trait Index L | .20 | .23 |
| 4. Study habits | .08 | .07 |
| 5. Scholarship marks | .19 | .23 |
| 6. Occupational interests | .16 | .10 |
| 7. Socio-economic status | .05 | .21 |
| 8. Total adjustment | —.08 | —.07 |
| 9. Neurotic tendency | —.09 | —.14 |
| 10. Self-sufficiency | .04 | .01 |
| 11. Dominance–Ascendance | .07 | .21 |

Summary Number 28 (91b)

a. Reference:
Pyle, W. H. "Intelligence and Teaching: An Experimental Study." *Educational Administration and Supervision*, XIII (October, 1927), pp. 433–48.

b. Criterion:
In-service supervisory ratings.

c. Number of persons studied:
Fifty-seven.

d. Aspects of teachers or teaching studied:
Intelligence and practice teaching.

e. Data-gathering devices:
Muscular Speed Test; Card sorting; Substitution Test; Manthanometer Test; Mental Multiplication; Reasoning Test; Literary Interpretation; Analogies; Auditory Learning; Key Alphabet; Detroit Intelligence Test; Tachistoscope Experiment; Visual Learning; Associative Coupling; and, Downey Will-Temperament Test.

f. Results:
Correlation between rated teaching ability and intelligence is .01.

Summary Number 29 (91c)

a. Reference:
Pyle, W. H. "The Relation Between Intelligence and Teaching Success." *Educational Administration and Supervision*, 14 (April, 1928), pp. 257–67.

b. Criterion:
In-service supervisory ratings.

c. Number of persons studied:
Ninety-nine.

d. Aspects of teachers or teaching studied:
Intelligence and practice teaching.

TABLE VI—Continued

e. Data-gathering devices:
Practice teaching grades and teaching success records.

f. Results:
Correlation between rated teaching ability and intelligence is .03.

Correlation between practice teaching grades and rated teaching ability is .15.

Summary Number 30 (92)

a. Reference:
Reitz, William. *Admission Status of 2188 Applicants for Teacher Education.* Research Studies in Admission and Placement. No. 2. Detroit, Michigan: College of Education, Wayne University, 1939.

b. Criterion:
Admission status.
Component factors in placement.
In-service ratings.

c. Number of persons studied:
2188 applicants: (345 unconditionally admitted; 1289 conditionally admitted; 554 that were not admitted).

d. Aspects of teachers or teaching studied:
Academic aptitudes, academic accomplishments, psycho-physical status, and teaching personality.

e. Data-gathering devices:
Curriculum Adviser's Recommendation
Committee on Students Recommendation
American Psychological Examination
Honor Point Average
Psychiatric Social Worker's Report
Faculty ratings (Unpublished)
Handwriting Quality (Detroit)
Principals ratings (Unpublished)
Employers report (Unpublished)
Health Report
Speech test (Unpublished)
Contemporary Affairs Test (Cooperative)
Bernreuter Personality Inventory
Spelling Test Score (Stanford Achievement)
Personal Data Booklet

f. Results:
A Factor analysis seemed to indicate the major factor loading to be:

| | Per cent |
|---|---|
| 1. Academic–Scholastic | 29% |
| 2. Interview Personality | 23% |
| 3. Dominance–Self Sufficiency or Autonomy | 16% |
| 4. Youth and Plasticity | 12% |
| 5. Professional Fitness for special Teaching field | 11% |
| 6. Socio-Emotional Adjustment | 9% |

These factors however accounted for only 39% of the variance.

Summary Number 31 (94)

a. Reference:
Retan, George A. "Emotional Instability and Teaching Success." *Journal of Educational Research,* 37:135–41, October, 1943.

b. Criterion:
Superintendent's ratings.

c. Number of persons studied:
152 student teachers.

d. Aspects of teachers or teaching studied:
Emotional stability.

e. Data-gathering devices:
Bernreuter Personality Inventory; Pressy X-O Test; Rating by County Superintendents.

f. Results:

Superintendent's Rating

| Emotional Stability | Good to Excellent No. | % | Fair to Poor No. | % | Total No. | % |
|---|---|---|---|---|---|---|
| Stable | 55 | 75.3 | 18 | 24.7 | 73 | 48 |
| Unstable | 41 | 51.9 | 38 | 48.1 | 79 | 52 |

Summary Number 32 (98)

a. Reference:
Ruediger, W. C. and Strayer, C. D. "The Qualities of Merit in Teachers." *Journal of Educational Psychology,* 1:272–78, 1910.

b. Criterion:
Supervisor's and principals ratings.

c. Number of persons studied:
Grade school teachers; the number varied with the qualities studied. (See table below)

d. Aspects of teachers or teaching studied:
General merit, experience, health, appearance, initiative, personality, teaching skill, order, following suggestions, accord, studiousness, and social factor.

e. Data-gathering devices:
Rating scale developed by Ruediger and Strayer.

f. Results:
Relationships found:

| General Merit and: | No. of cases | Pearson Coefficient |
|---|---|---|
| Experience | 25 | .36 |
| Health | 18 | .04 |
| Appearance | 24 | .20 |
| Initiative | 26 | .50 |
| Personality | 26 | .46 |
| Teaching Skill | 26 | .54 |
| Order | 25 | .56 |
| Following Suggestions | 24 | .42 |
| Accord | 26 | .38 |
| Studiousness | 24 | .44 |
| Social Factor | 23 | .28 |
| Initiative compared with following: Suggestions | 24 | .38 |
| Personality compared with Accord | 24 | .36 |

Summary Number 33 (100)

a. Reference:
Sandiford, Peter and others. *Forecasting Teaching Ability.* Bulletin No. 8, Toronto, Ont.: Department of Research, University of Toronto, 1937, 93 pp. Excerpts: Elementary School Journal, 38: 326–39, January, 1938.

b. Criterion:
Study one: Practice teaching marks. (The average of all lessons taught during the year.)
Study two: Combined ratings of opinions of inspectors who had reported annually on the teachers.

TABLE VI—Continued

c. Number of persons studied:

Study one: 420 college students, enrolled in the 1934–35 session, University of Toronto.
Study two: 336 college students who were enrolled at the University of Toronto during the session 1925–26.

d. Aspects of teachers or teaching studied:

Study one: General information, vocabulary comprehension, reading ability, knowledge of subject matter, and personality.

Study two: Knowledge of subject matter, professional information, and practice teaching marks.

e. Data-gathering devices:

Study one: General information test, vocabulary test, completion test, paragraph reading test, general science test, social studies test, foreign literature test, fine arts test, Bernreuter Personality Inventory, questionnaire, and a qualifying examination for specialists.

Study two: School records and rating sheet for inspectors.

f. Results:

Study one:

Correlation of Average Teaching Marks with Test Scores

| Test | r |
|---|---|
| General Information | .16 |
| Vocabulary | .28 |
| Completion | .26 |
| Paragraph Reading | .26 |
| General Science | .15 |
| Fine Arts | .28 |
| Foreign Literature | .25 |
| Social Studies | .07 |
| Bernreuter Personality Scores | .14 |
| Psychology Test | .35 |

Study two:

Correlation of teaching success with:

| | r |
|---|---|
| Mark in Science of Education | .17 |
| Mark in School Management | .17 |
| Mark in English | .20 |
| Mark in History | .13 |
| Mark in Geography | .20 |
| Average of the above five subjects | .25 |
| Practice-Teaching Mark | .35 |

Summary Number 34 (102)

a. Reference:

Seagoe, M. V. "Prediction of In-Service Success in Teaching." *Journal of Educational Research*, 39: 658–63, May, 1946.

b. Criterion:

University of California Rating Scale for Practice Teaching. Percentile rank of teacher in own faculty by administrator.

c. Number of persons studied:

25 teachers chosen from an original group of 125.

d. Aspects of teachers or teaching studied:

Art judgment, musical talent, mechanical ability, intelligence, academic achievement, temperament, personality, knowledge of contemporary affairs, interest in teaching, values, and teaching aptitudes.

e. Data-gathering devices:

See summary of results.

f. Results:

Correlations Between Tests and Teaching Success

| Test | Student Scale | Field Rank |
|---|---|---|
| MacQuarrie Test for Mechanical Ability | .31 | —.01 |
| Meier Art Judgment Test | .21 | .07 |
| Seashore Test of Musical Talent: Median | —.14 | —.05 |
| American Council Psychological Examination: Gross | .12 | .10 |
| Cooperative General Achievement Test: | | |
| Mathematics | .14 | —.08 |
| Natural Science | .10 | —.24 |
| Social Studies | .02 | .13 |
| Cooperative Contemporary Affairs Test, 1941 | .04 | .12 |
| Cooperative General Culture Test | —.02 | .01 |
| Humm–Wadsworth Temperament Scale: | | |
| Qualitative Estimate | .53 | .65 |
| No-Count | .30 | .52 |
| Bell Adjustment Inventory, Adult Form, Total | —.40 | —.31 |
| Bernreuter Personality Inventory: | | |
| F1-C | —.38 | —.30 |
| F2-S | —.06 | —.26 |
| Thurstone Personality Schedule | —.36 | —.55 |
| Willoughby Emotional Maturity Scale | .19 | .02 |
| Strong Vocational Interest Blank: M-F | .08 | .08 |
| Vernon–Allport Study of Values: | | |
| Economic | —.33 | .03 |
| Political | .25 | .14 |
| Aesthetic | —.02 | .26 |
| Social | —.01 | —.23 |
| Religious | .01 | —.08 |
| Theoretical | .00 | —.16 |
| Harper Test of Social Attitudes | .06 | .08 |
| Strong Vocational Interest Blank: Teacher, Elementary (Women) Housewife | —.01 | —.08 |
| Morris Trait Index L | .44 | .00 |
| Coxe–Orleans Teaching Prognosis | .36 | .01 |
| George Washington University Teaching Aptitude | .19 | —.19 |
| Stanford Educational Aptitudes: | | |
| A-R | .19 | .02 |
| T-R | .09 | .14 |
| T-A | —.01 | .04 |

Summary Number 35 (108)

a. Reference:

Shannon, John R. "A Comparison of Highly Successful Teachers, Failing Teachers, and Average Teachers at the Time of Their Graduation from Indiana State Teachers College." *Educational Administration and Supervision*, 26:43–51, January, 1940.

b. Criterion:

Evaluation according to recognition in the field.

c. Number of persons studied:

259 men and women from 31 graduating classes of Indiana State Teachers College.

d. Aspects of teachers or teaching studied:

Scholarship, intelligence, participation in extra-curricular activities.

e. Data-gathering devices:

Records in registrar's office, and college annual for extra-curricular and other activities.

f. Results:

TABLE VI—Continued

Comparisons of Means of Measures of Excellence in the Three Prognostics by the Three Groups of Graduates

| Groups of graduates | Scholarship indexes 1898–1925 | Scholarship indexes 1926–1934 | Intelligence percentiles, 1926–1934 | Number of extra-curriculum participations, 1898–1934 |
|---|---|---|---|---|
| **Toppers and average.** | | | | |
| Male: | | | | |
| Difference | 4.18 | 22.78 | 21.00 | .58 |
| Critical ratio | 4.83 | 11.38 | 2.75 | 2.26 |
| Group favored | Toppers | Toppers | Toppers | Toppers |
| Female: | | | | |
| Difference | 8.44 | 22.78 | 8.69 | .52 |
| Critical ratio | 4.99 | 5.96 | .87 | 1.21 |
| Group favored | Toppers | Toppers | Toppers | Toppers |
| Total: | | | | |
| Difference | 4.90 | 22.78 | 14.81 | .57 |
| Critical ratio | 6.23 | 8.16 | 2.24 | 2.56 |
| Group favored | Toppers | Toppers | Toppers | Toppers |
| **Toppers and failures.** | | | | |
| Male: | | | | |
| Difference | 8.05 | 14.45 | 22.86 | 1.14 |
| Critical ratio | 4.36 | 3.97 | 2.57 | 3.65 |
| Group favored | Toppers | Toppers | Toppers | Toppers |
| Female: | | | | |
| Difference | 15.63 | 17.22+ | 8.61 | .94 |
| Critical ratio | 7.08 | 5.37 | .89 | 2.32 |
| Group favored | Toppers | Toppers | Failures | Toppers |
| Total: | | | | |
| Difference | 9.42 | 15.84 | 5.12 | 1.13 |
| Critical ratio | 6.65 | 6.43 | .76 | 4.53 |
| Group favored | Toppers | Toppers | Toppers | Toppers |
| **Average and failures.** | | | | |
| Male: | | | | |
| Difference | 3.87 | 8.33 | 1.86 | .56 |
| Critical ratio | 2.09 | 2.12 | .19 | .19 |
| Group favored | Average | Failures | Average | Average |
| Female: | | | | |
| Difference | 7.19 | 5.56 | 17.30 | .42 |
| Critical ratio | 3.31 | 1.74 | 2.67 | 1.13 |
| Group favored | Average | Failures | Failures | Average |
| Total: | | | | |
| Difference | 4.52 | 6.94 | 9.69 | .56 |
| Critical ratio | 3.19 | 2.27 | 1.63 | 2.31 |
| Group favored | Average | Failures | Failures | Average |

### Summary Number 36 (107)

a. Reference:
Shannon, J. R. "A Comparison of Three Means for Measuring Efficiency in Teaching." *Journal of Educational Research*, 29:501–508, March, 1936.

b. Criterion:
Various devices for measuring teaching efficiency: Attention scores, score card scores, and general informal estimates.

c. Number of persons studied:
111 teachers; primary through high school.

d. Aspects of teachers or teaching studied:
Teaching efficiency.

e. Data-gathering devices:
Attention scores, score card scores, and general estimates.

f. Results:

### Summary Number 37 (109)

a. Reference:
Shannon, John R. "Elements of Excellence in Teaching." *Educational Administration and Supervision*, 27:168–76, March, 1941.

b. Criterion:
Evaluations of supervisors.

c. Number of persons studied:
782 elementary and secondary school teachers (430 best, 352 worst).

d. Aspects of teachers or teaching studied:
Knowledge of subject, knowledge of other things, teaching skill, professional attitude, cooperation, discipline, other classroom management, personality, community relations, teacher-pupil relations.

e. Data-gathering devices:
Interviews with 164 supervisors, about teachers, by the author; data recorded on basis of ten traits listed above.

Coefficients of Correlation Between Rankings as Determined by the Different Devices

| Rankings Compared | Groups (15 to 20 student teachers in each group) I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| A and S* | .07 | .41 | —.07 | .44 | —.61 | .26 | .47 | .31 |
| A and E | .21 | .21 | —.10 | .38 | —.16 | .26 | .73 | .21 |
| S and E | .83 | .38 | .54 | .63 | .44 | .97 | .65 | .75 |
| A and $E_1$ | .09 | .16 | .02 | .33 | --- | --- | --- | --- |
| A and $E_2$ | .14 | .24 | .19 | .37 | --- | --- | --- | --- |
| S and $E_1$ | .93 | .29 | .41 | .34 | --- | --- | --- | --- |
| S and $E_2$ | .37 | .49 | .63 | .36 | --- | --- | --- | --- |

*A attention scores
S score-card scores
E general informal estimates

TABLE VI—Continued

f. Results:

The elements of merit which contribute most to success in teaching are: "Teaching skill," "personality," and "teacher-pupil relations." To these, "knowledge of subject" should be added for high school teachers. The qualities which have the least potency in establishing success are: "Classroom management exclusive of discipline," "community relations," and "breadth of general culture."

The elements of demerit which contribute most to failure in teaching are: "Lack of teaching skill," "poor personality," and "unwholesome teacher-pupil relations." "Weak discipline" should be added for high school teachers. The weaknesses which have least effect in defeating teachers are: "Ineffective classroom management exclusive of discipline," "unwholesome community relations," and "lack of general culture."

Those qualities which have least influence in determining the success of good teachers are the same ones which have the least in determining the failure of poor ones. Those which are most potent in determining success are not identically the same for both successful and failing teachers, but they are nearly so. "Discipline" is a stumbling block for the failures in high school more than it is a pillar of strength for the successful.

To a considerable extent supervisors rate teachers on the basis of general impression, unable to cite instances or illustrations supporting their convictions.

Merit is not general, or all-around, in successful teachers, nor is its lack general, or all-around, in failing teachers.

The elements conditioning success or failure of student-teachers differ slightly from those doing the same for regular teachers, the chief variable qualities being "community relations," "knowledge of subject," and "discipline."

Sex differences concerning elements of excellence in teachers probably are insignificant.

Summary Number 38 (115)

a. Reference:

Somers, Grover T. *Pedagogical Prognosis: Predicting the Success of Prospective Teachers.* Contributions to Education, No. 140. New York: Teachers College, Columbia University, 1923, 138 p.

b. Criterion:

Supervisory force ratings in training school; supervisors' ratings in school of teachers' first year of teaching.

c. Number of persons studied:

156 students in training in a normal school; 110 of these same individuals in their first year of teaching.

d. Aspects of teachers or teaching studied:

Intellectual ability, industry, scholarship, tact, sympathy, sincerity, optimism, personal appearance. These were merged into a composite score for the purposes of this study and called personality.

e. Data-gathering devices:

"Score Card for Teachers" (for judging traits or qualities), Thurstone's Cycle Omnibus Test, Range of Information Test (revised), Trabue Language Completion Tests, Alpha and Beta (Kelley revision) Preparatory School records, Normal School records, and Service Card for Estimating Teachers.

f. Results:

Correlations between teaching in training school and:

| | |
|---|---|
| Age | .12 |
| Size of prep. school | —.01 |
| "Discipline Records" | —.58 |
| Extra-curricular activities | .42 |
| Mental tests | .48 |
| Personality | .61 |
| First semester marks | .63 |
| High school marks | .64 |
| Personality estimates of high school teachers | .54 |
| Teaching in training school | .70 |

Correlations between teaching in the field and:

| | |
|---|---|
| Age | .07 |
| Size. of prep. school | —.05 |
| "Discipline Records" | —.58 |
| Extra-curricular activities | .41 |
| Mental tests | .43 |
| Personality | .62 |
| First semester marks | .60 |
| High school marks | .74 |
| Personality estimates of high school teachers | .63 |
| Two years' marks | .71 |
| Normal school success | .73 |

Summary Number 39 (117)

a. Reference:

Stuit, Dewey B. "Scholarship as a Factor in Teaching Success." *School and Society*, 46:382–84, September 18, 1937.

b. Criterion:

Ratings of teachers by superintendent.

c. Number of persons studied:

146 teachers.

d. Aspects of teachers or teaching studied:

Scholarship.

e. Data-gathering devices:

College grades, ratings by superintendent.

f. Results:

Correlation between success as estimated by superintendents and scholastic success as measured by university grades is .31 (biserial r).

Summary Number 40 (122)

a. Reference:

Tiedeman, Stuart C. "A Study of Pupil Teacher Relationships." *Journal of Educational Research*, 25: May, 1942.

b. Criterion:

Pupil ratings of teachers.

c. Number of persons studied:

450 seventh, eighth, and ninth grade junior high school pupils.

d. Aspects of teachers or teaching studied:

Pupil-teacher relationships; characteristics of teachers.

e. Data-gathering devices:

Student lists of likes and dislikes of teacher activity or characteristics.

TABLE VI—Continued

f. Results:

| Type of teacher characteristics | Category | Grade 7 F | Grade 7 rank | Grade 8 F | Grade 8 rank | Grade 9 F | Grade 9 rank | Rank Composite: all grades |
|---|---|---|---|---|---|---|---|---|
| Autocratic | V | 56 | 2 | 48 | 2 | 111 | 1 | 1 |
| Uses ridicule, sarcasm, nags | I | 35 | 3 | 52 | 1 | 97 | 2 | 2 |
| Threatens to punish, frightens to secure discipline | III | 74 | 1 | 28 | 4 | 77 | 4 | 3 |
| Fails to provide for individual differences | II | 19 | 5.5 | 41 | 3 | 73 | 5 | 4.5 |
| Disagreeable personal characteristics | VI | 19 | 5.5 | 24 | 5 | 78 | 3 | 4.5 |
| Shows partiality towards certain pupils | IV | 32 | 4 | 23 | 6 | 56 | 6 | 6 |

Summary Number 41 (123)

a. Reference:
Tiegs, Ernest W. *An Evaluation of Some Techniques of Teacher Selection.* Bloomington, Illinois: Public School Publishing Company, 1928.

b. Criterion:
The official point rating made by supervisors of the Minneapolis school system (composite score).

c. Number of persons studied:
25 on first study; 77 on second.

d. Aspects of teachers or teaching studied:
Personality, intelligence, scholarship, and professional competency.

e. Data-gathering devices:
Professional Tests for Elementary Teachers by Knight, Ruch, Bathurst, and Telford, Twelve-point graphic rating scale developed by the author, Forty-one point graphic rating scale developed by the author, and Miller Mental Ability Test.

f. Results:
The following correlations were reported:

| | | |
|---|---|---|
| a. Recommendations (11 judges) with criterion | .08 | |
| b. Letters of application with criterion (11 judges) | —.04 | |
| c. Photographs with criterion (11 judges) | —.08 | |
| d. Composite (adding ranks) of recommendations, letters of application, and photographs with criterion (5 judges) | —.13 | |
| e. Complete file on each teacher with criterion | .27 | |
| f. Second ranking of recommendations with criterion (f judges making a second ranking) | .30 | |
| g. Intercorrelations | | |
| 1. Between 5 judges on recommendations | —.87 | to +.78 |
| 2. Between 6 judges on letters of application | —.11 | to +.62 |
| 3. Between 5 judges on photographs | .00 | to +.50 |
| h. Coefficient of reliability between first and second rankings of recommendations (5 judges) | .00 | to +.87 |
| i. Reliability of 12-point graphic rating blank (77 superintendents and principals rated 77 teachers twice) | .79 | |
| j. Reliability of individual items on 12-point rating blank (77 judges) range from | .14 | to +.84 |
| k. Correlation between ratings of 21 principals and two supervisors on 12-point scale (25 teachers) | .70 | |
| l. Correlaion between predictions (12-point blank) and criterion (50 teachers) | —.21 | |
| m. Reliability of 41-point rating blank (75 judges) | .93 | |
| n. Reliability of individual items on 41-point blank (75 judges) range from | .52 | to +.91 |
| o. Correlation between results of trade test and criterion (80 teachers) | .02 | |
| p. Correlation between results of mental test and criterion (80 teachers) | .01 | |
| q. Correlation between trade test and mental test (80 teachers) | .54 | |
| r. Correlation between 12-point graphic rating blank and mental test (50 teachers) | .19 | |
| s. Correlation between 12-point rating blank and trade test (50 teachers) | .33 | |
| t. Correlation between application blank and criterion | .27 | |

Summary Number 42 (128)

a. Reference:
Ullman, Roy Roland. *The Prognostic Value of Certain Factors Related to Teaching Success.* A. L. Garbar Co., Ashland, Ohio, 1931.

b. Criterion:
Teaching success as determined by a rating of the superintendent, principal, or supervisor.

c. Number of persons studied:
College seniors in the course in Directed Observation and Teaching during the year 1927–28.

d. Aspects of teachers or teaching studied:
Social intelligence; general intelligence; knowledge of principles of teaching; knowledge of the functions, purposes and objectives of secondary education; the socio-economic status of the student; the student's own rating of his teaching ability; an analysis of the student's interest with special references to interest in teaching; the success of the student in courses in education; the success of the student in his major subject; the success of the student in college courses other than those in education or the major subject; and, success as a student teacher.

e. Data-gathering devices:
Forms E and F of the Brown Psychological Examination; Weber's Standard Achievement Test on Aims, Purposes, Objectives, Attributes, and Functions in Secondary Education; Odell's Standard Achievement Test on Principles of Teaching in Secondary Schools; Graphic Rating Scale for Teachers by Max Freyd; Interest Report Blank by Cowdery and Strong; and, College grades in professional, major and academic subjects.

f. Results:
Correlations between teaching success and factors thought to be related to teaching success were:

| | | | |
|---|---|---|---|
| Intelligence | .15 | Professional marks | .30 |
| Student teaching | .36 | Social intelligence | .18 |
| Academic marks | .30 | Professional tests | .14 |

Summary Number 43 (129)

a. Reference:
Van Denburg, Joseph K. "An Objective Rating Scale for Teachers of Biology in High Schools." *School and Society,* 46:698–704, November 27, 1937.

b. Criterion:
Supervisors were asked to list items which they considered were done by very superior teachers of Biology.

TABLE VI—Continued

c. Number of persons studied:
45 supervisors of Biology, teaching in high schools.

d. Aspects of teachers or teaching studied:
See summary number 6.

e. Data-gathering devices:
(1934) Mimeographed letter sent to supervisors and were asked to list the things a good teacher of Biology did.

(1935) Cut from 1100 to 500 items and sent out again.

(1935) Reduced from 500 to 199.

f. Results:
A description of the ideal teacher in Biology in 118 items which all competent judges appeared to be able to observe with a high degree of objectivity and agreement.

The major categories were as follows:

I. Planning the Lesson

II. Classroom Routine
- A. Class Management
- B. Discipline
- C. Class Hygiene

III. Lesson Proper
- A. Beginning of the Lesson
- B. Questioning
- C. Blackboard and Illustrative Material
- D. Written Work
- E. Assignment and Homework
- F. Conduct of Special Demonstrations and Laboratory Lessons

IV. Relations with Pupils
- A. Personal Relations
- B. Pupil Guidance

V. Special Attention to Individuals

VI. Self-Improvement

Summary Number 44 (131)

a. Reference:
Von Haden, Herbert I. "An Evaluation of Certain Types of Personal Data Employed in the Prediction of Teaching Efficiency." *Journal of Experimental Education*, XV, pp. 61–84 (September, 1946).

b. Criterion:
(1) A composite of five supervisory ratings.
(2) Evaluations made by pupils in the classes taught by the subjects.
(3) Residual pupil gain as measured by standardized tests.

c. Number of cases:
58 women teachers.

d. Aspects of teachers or teaching studied:
Teaching success as associated with:
(1) Adaptability (2) Considerateness (3) Energy (4) Initiative (5) Professional Judgment (6) Social Adequacy (7) System of Values (8) Work Habits.

e. Data-gathering devices:
Subjective materials.
(1) Comments recorded by members of the staff of the Department of Education, University of Wisconsin, who conducted two planned interviews with the students.
(2) Statements of instructors in the Department of Education concerning the students' probable future success as teachers.
(3) General evaluations of the candidates made by supervisors of their school and community activities and their work in practice teaching.
(4) Stenographic reports of two 40-minute interviews conducted according to procedures previousiy worked out by the interviewers.
(5) Digests of the interviewers, in which responses were classified according to their inferences for eight personal qualities.
(6) Educational autobiographies written by the students during their junior year at the University.

f. Results:

Levels of Significance of Coefficients of Correlation for Ratings of Eight Personal Qualities Based on Interviews, Interview Digests, and Autobiographies with the Criteria

| Qualities | Frequency of Significance Levels | | | | |
|---|---|---|---|---|---|
| | 1% | 2–5% | 6–10% | 11–50% | 51–100% |
| **Adaptability** | | | | | |
| Supervisory Ratings | ---- | 3 | 1 | 4 | 3 (1) |
| Pupil Evaluation | ---- | ---- | 3 | 6 | 3 |
| Pupil Gain | ---- | ---- | ---- | 4 (1) | 3 (4) |
| **Considerateness** | | | | | |
| Supervisory Ratings | ---- | ---- | 2 | 8 | 1 (1) |
| Pupil Evaluation | ---- | 2 | ---- | 4 (1) | 4 (1) |
| Pupil Gain | ---- | ---- | ---- | 6 (1) | 4 (1) |
| **Energy** | | | | | |
| Supervisory Ratings | 2 | 2 | ---- | 7 | 1 |
| Pupil Evaluation | ---- | ---- | ---- | 8 | 3 (1) |
| Pupil Gain | ---- | ---- | ---- | 1 (3) | 5 (3) |
| **Initiative** | | | | | |
| Supervisory Ratings | 3 | 6 | 1 | 2 | ---------- |
| Pupil Evaluation | ---- | 3 | 2 | 8 | ---------- |
| Pupil Gain | ---- | ---- | ---- | 2 | 2 (3) |
| **Professional Judgment** | | | | | |
| Supervisory Ratings | 2 | 5 | 2 | 3 | ---------- |
| Pupil Evaluation | 1 | 1 | 1 | 7 (1) | 1 |
| Pupil Gain | ---- | ---- | 1 | 3 (3) | 4 (1) |
| **Social Adequacy** | | | | | |
| Supervisory Ratings | 1 | 1 | ---- | 9 | 1 |
| Pupil Evaluation | ---- | 2 | ---- | 7 | 2 (1) |
| Pupil Gain | ---- | ---- | 3(1) | 5 (3) | ---------- |

Numbers in parentheses indicate frequencies for levels of significance for negative coefficients of correlation.

TABLE VI—Continued

Levels of Significance of Coefficients of Correlation for Ratings of Eight Personal Qualities Based on Interviews, Interview Digests, and Autobiographies with the Criteria—Continued

| | | | | | |
|---|---|---|---|---|---|
| **System of Values** | | | | | |
| Supervisory Ratings | ---- | 3 | 1 | 5 | 2 (1) |
| Pupil Evaluation | ---- | 1 | ---- | 6 | 3(2) |
| Pupil Gain | ---- | ---- | ---- | 4 | 3 (5) |
| **Work Habits** | | | | | |
| Supervisory Ratings | 7 | ---- | 1 | 3 | 1 |
| Pupil Evaluation | ---- | ---- | ---- | 8 | 4 |
| Pupil Gain | ---- | 1 | ---- | 5 (1) | 3 (2) |
| **Mean of 8 Qualities** | | | | | |
| Supervisory Ratings | 4 | 6 | 1 | 1 | ---- |
| Pupil Evaluation | ---- | 3 | 4 | 3 | 2 |
| Pupil Gain | ---- | ---- | ---- | 3 | 6 (3) |
| Total | 20 | 38 | 20 | 130 (12) | 66 (38) |
| Per Cent | 6.2 | 11.7 | 6.2 | 40.1 (3.7) | 20.4 (11.7) |

Summary Number 45 (132)

a. Reference:
Ward, Lewis B. and Kirk, Samuel A. "Studies in the Selection of Students for a Teachers College." *Journal of Educational Research*, 35:665–72, May, 1942.

b. Criterion:
Ratings (on a five point scale) by supervisors and critic teachers; practice teaching grades.

c. Number of persons studied:
Groups of 95,76, 99, and 208 students.

d. Aspects of teachers or teaching studied:
Personality, intelligence, scholarship, appearance, work habits, influence over others, emotional control, plans, and purposes.

e. Data-gathering devices:
Bernreuter Personality Inventory, Henmon–Nelson Intelligence Test, High School rank, Henmon–Nelson formula for predicting success in college, supervisors ratings, high school principal or high school teachers rating of general behavior, practice teaching grades, general college grades.

f. Results:

Correlation of Raw Scores on Bernreuter Inventory and Ratings of Supervisors and Critic Teachers During Practice Teaching
(95 cases)

| | B1-N | B2-S | B3-I | B4-D | F1-C | F2-S |
|---|---|---|---|---|---|---|
| Supervisor's ratings | —.11 | —.24 | —.08 | .04 | .02 | —.11 |
| Critic Teachers' ratings | .09 | —.23 | .01 | .00 | .08 | —.11 |

Correlations of High School Ratings with Practice Teaching and General College Grades
(208 students)

| | Practice Teaching Grades | College Grades |
|---|---|---|
| Appearance and Manner | .27 | .05 |
| Independence in Work Habits | .18 | .24 |
| Influence over others | .28 | .14 |
| Emotional Control | .24 | .16 |
| Plan and Purpose | .14 | .24 |

Summary Number 46 (133)

a. Reference:
Whitney, Frederick L. "The Prediction of Teaching Success." *Journal of Educational Research Monographs*. Bloomington, Illinois: Public School Publishing Co., 1924, 85 pp.

b. Criterion:
Ratings in student teaching and teaching success in the field as judged by supervisory officers.

c. Number of persons studied:
Measurement of the traits of 1156 graduates from two year college curricula in 12 representative normal schools.

d. Aspects of teachers or teaching studied:
Intelligence; marks in academic courses in the State Normal Schools; marks in professional courses.

e. Data-gathering devices:
Seven functions used:

1. Teaching success, as judged by supervisory officers during the first semester under contract after graduation.
2. Intelligence, as measured by tests for general intelligence such as the Army Alpha and Thorndike's Examination for High School Graduates.
3. Secondary record, an average of all high school marks earned during a four year course.
4. Academic record, an average of all marks in normal school subject matter courses.
5. Professional record, and average of all marks in normal school courses in education, educational psychology, and the like.
6. Student teaching success, an average of ratings in practice teaching made by the training school faculty.
7. Physique, a checking of such items as chest expansion, posture, lung capacity, weight, general health, etc.

f. Results:
Intercorrelation Among Traits in 12 State Normal Schools, 780 Graduates, Classes of 1920

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Teaching Success | | | | | | | |
| 2. Intelligence | .03 | | | | | | |
| 3. Secondary record | .09 | .31 | | | | | |
| 4. Academic marks | .07 | .34 | .36 | | | | |
| 5. Professional marks | .14 | .33 | .36 | .48 | | | |
| 6. Student teaching | .24 | .16 | .27 | .39 | .27 | | |
| 7. Physique | .12 | .20 | .19 | .10 | .08 | .30 | |

Summary Number 47 (138)

a. Reference:
Young, Frank. "Some Factors Affecting Teaching Efficiency." *Journal of Educational Research*, 32: 649–52, May, 1939.

b. Criterion:
Ratings of the teacher by the principal, with no stated criteria.

TABLE VI—Continued

c. Number of persons studied:
1521 high school teachers.

d. Aspects of teachers or teaching studied:
Extent of training; subject taught; professional education; experience.

e. Data-gathering devices:
Questionnaire; ratings.

f. Results:
The results of this study were as follows:
The teachers who hold higher degrees are rated higher than those who hold lower degrees; i. e., M. A. graduates were rated higher than B. A. graduates, etc.

The teachers who had had a large amount of training in subject matter in their field of specialization were rated higher than those who had had less training in their field of specialization.

Likewise, the teachers who had had 24 or more semester hours training in courses in education were rated higher than those who had had less than 24 semester hours in education.

According to the ratings given these 1,521 high school teachers, experience up to five years counts toward making one a more efficient teacher. Experience ceased to be a factor at that point. There was considerable improvement the first two years; slight improvement the next three years; no improvement from 5 to 20; some decline thereafter.

### *III. Studies using school grades as the criterion of teaching efficiency*

Summary Number 1 (29)

a. Reference:
Cook, Walter W. "Predicting Success of Graduate Students in a College of Education." *School and Society*, 56:192–95, September 5, 1942.

b. Criterion:
Success in graduate courses as measured by: a. Numerical scores in graduate courses. b. Numerical scores on comprehensive examinations given to both M. A. and Ph. D. candidates.

c. Number of persons studied:
788 graduate students at the University of Minnesota.

d. Aspects of teaching studied:
Academic aptitude, educational information and application, mathematical ability, English skills.

e. Data-gathering devices:
Miller's Analogies, University of Minnesota. Educational Information and Application (Cook, University of Minnesota); Cooperative Survey Test in Mathematics, Form P. Cooperative English, Form OM.

f. Results:
The relationships between success in graduate courses in the College of Education and the scores on four aptitude tests were found to be as follows:

| | Correlations | | |
|---|---|---|---|
| | Numerical scores in graduate courses | Comprehensive Educational Administration | Examinations Educational Psychology |
| Miller's Analogies (W. S. Miller) | .48 | .46 | .50 |
| Educational Information and Application (W. W. Cook) | .60 | .56 | .56 |
| Cooperative Mathematics, Form P | .33 | .33 | .36 |
| Cooperative English, Form O.M | .43 | .48 | .18 |

Summary Number 2 (38)

a. Reference:
Durlinger, Glen W. "Scholastic Prediction in a Teachers College." *Journal of Experimental Education*, 11:257–67, June, 1943.

b. Criterion:
Grade point average, intelligence, achievement, English, music, personality, personal data.

c. Number of persons studied:
321 students (213 women, 108 men).

d. Aspects of teachers or teaching studied:
Intelligence, achievement, English, music, personality, personal fitness.

e. Data-gathering devices:
Teachers College Personnel Association Tests for: Elementary Achievement, College Aptitude, Personal Data, English; plus, Bernreuter Personality Inventory, Providence Music Test.

f. Results:

Zero Order Correlations

| | | | | | |
|---|---|---|---|---|---|
| $r_{12}$ | .48 | $r_{24}$ | .85 | $r_{37}$ | .47 |
| $r_{13}$ | .50 | $r_{25}$ | .40 | $r_{46}$ | .43 |
| $r_{14}$ | .51 | $r_{26}$ | .05 | $r_{46}$ | .00 |
| $r_{15}$ | .31 | $r_{27}$ | .46 | $r_{47}$ | .50 |
| $r_{16}$ | .06 | $r_{34}$ | .74 | $r_{56}$ | .07 |
| $r_{17}$ | .35 | $r_{35}$ | .42 | $r_{57}$ | .37 |
| $r_{23}$ | .73 | $r_{36}$ | .01 | $r_{67}$ | .12 |

Key
1. Grade Point Average
2. Intelligence
3. Achievement
4. English
5. Music
6. Personality
7. Personal data

Summary Number 3 (68)

a. Reference:
Lancelot, William H. "A Study of Teaching Efficiency as Indicated by Certain Permanent Outcomes." *The Measurement of Teaching Efficiency*. New York: Macmillan Co., 1935, pp. 1–69.

b. Criterion:
Grades of students in subsequent courses in college mathematics; also number of courses taken.

c. Number of persons studied:
1143 students taught by 16 teachers.

d. Aspects of teachers or teaching studied:
General teaching efficiency.

e. Data-gathering devices:
Grades.

f. Results:
Differences in the subsequent performance of student taught by different teachers were found to be significant.

Summary Number 4 (77)

a. Reference:
Martin, Lycia O. *The Prediction of Success for Students in Teacher Education*. New York: Teachers College, Columbia University, 1944. 110 pp.

TABLE VI—Continued

b. Criterion:
Criterion of success is college marks.

c. Number of persons studied:
209 college students.

d. Aspects of teachers or teaching studied:
Intelligence, scholastic achievement, personality.

e. Data-gathering devices:
Superintendents' ratings, college marks, standing in high school, extent of participation in extra-class activities in college, number of offices held in college organizations, Teachers College Personnel Association Tests, American Council Psychological Examination, personal qualities evaluated by the college supervisor of student teaching, professional qualities evaluated by the college supervisor of student teaching, personality ratings by high school faculty, Cooperative General Culture Test.

f. Results:
Multiple correlation between nine entrance requirements (general mathematics, history, oral English, written English, objective English, science, interview with member of faculty, high school personality rating and high school standing). The criterion of success was .65. This correlation can be increased to .78 if the American Council Psychological Examination is included. Correlation between thirteen variables including entrance requirements and four first semester variables selected at the end of two years in college and the criterion was .93.

The most important factors for prediction at the end of the first semester in college are: first semester marks, written English, objective English, science, high school personality ratings, history, rank in high school class, and mathematics.

Summary Number 5 (121)

a. Reference:
Thomas, Lawrence G. "Using Grade Average in Selecting Prospective Teachers." *Journal of Educational Research*, 37:684–90, May, 1944.

b. Criterion:
A comparison of the first year teaching assignments of the graduates with their academic majors and minors.

c. Number of persons studied:
150 graduates of the School of Education at Stanford University.

d. Aspects of teachers or teaching studied:
Importance of grade averages, in major and minor fields and in education courses.

e. Data-gathering devices:
College grades.

f. Results:

| | |
|---|---|
| Graduates teaching subjects in major field | 71% |
| Graduates teaching subjects in minor field | 42% |
| Graduates teaching at least one subject outside of either major or minor field | 30% |
| Graduates teaching exclusively outside of either major or minor field | 2% |

Major field grade averages are important enough to justify their being considered separately.

The grade averages received in the minor field should be combined with the grade averages obtained in the general education courses as an average index of general competence outside the major field.

The students grade average received in professional education courses should be considered separately.

*IV. Studies using pupil growth and achievement as the criterion of teaching efficiency*

Summary Number 1 (9)

a. Reference:
Barr, A. S. and others. "The Validity of Certain Instruments Employed in the Measurement of Teaching Ability." *The Measurement of Teaching Efficiency*. New York: Macmillan Co., 1935, pp. 71–141.

b. Criterion:
1) Gain in pupil achievement.
2) Rating scales.
3) Composite of nine measures of qualities commonly associated with teaching success.
4) Composite of the six tests of teaching ability.
5) Composite of all these nineteen variables. Combined, first, as a composite in which each variable was given the same weight; and second, as a composite of three equally weighted components.

c. Number of persons studied:
66 classes.

d. Aspects of teachers or teaching studied:
Intelligence, trait index, aptitudes, professional information, health, personality, ability in arithmetic, social intelligence, vocational interests.

e. Data-gathering devices:
See results.

f. Results:

Coefficients of Correlation Between the Measures and the Criteria

| | $X_1$ | $X_2$ | $X_3$ | $X_4$ | $X_5$ | $X_6$ |
|---|---|---|---|---|---|---|
| 1. Gain in raw score, Stanford Achievement | ----- | .09 | .08 | ----- | .16 | .57 |
| 2. Gain in accomplishment quotient | ----- | —.04 | —.18 | ----- | —.11 | .35 |
| 3. General merit rankings | —.15 | .63 | —.07 | ----- | .52 | .23 |
| 4. Strayer–Engelhardt, Teacher rating scale | .19 | .15 | ----- | ----- | .80 | .66 |
| 5. Michigan Teacher Rating | .13 | ----- | .11 | ----- | .84 | .65 |
| 6. Pennsylvania Teacher Rating scale | —.01 | ----- | .00 | ----- | .80 | .53 |
| 7. Giles Teacher Rating Scale | —.32 | ----- | —.06 | ----- | .74 | .48 |
| 8. Almy–Sorenson Teacher rating scale | —.07 | ----- | .03 | ----- | .76 | .50 |
| 9. Schutte-Teacher rating scale | —.06 | ----- | .12 | ----- | .79 | .57 |
| 10. Torgerson Teacher rating scale | —.09 | ----- | .10 | ----- | .33 | .55 |
| 11. Social Intelligence test | .09 | .10 | ----- | ----- | .31 | .35 |
| 12. Psychological Examination | —.19 | —.13 | ----- | ----- | .37 | .36 |
| 13. Morris Trait Index I | —.04 | .08 | ----- | ----- | .17 | .22 |
| 14. Knight Aptitude test | —.10 | .28 | ----- | ----- | .47 | .43 |
| 15. New Stanford Arithmetic test | —.02 | .02 | ----- | ----- | .02 | .17 |
| 16. Torgerson Professional test | .08 | .16 | ----- | ----- | .27 | .35 |
| 17. Wood Health Scale | .23 | —.11 | ----- | ----- | —.11 | .04 |
| 18. Personality Rating Scale | .15 | .35 | ----- | ----- | .34 | .26 |
| 19. Strong Vocational Interest Blank | .03 | —.11 | ----- | ----- | .06 | .20 |

TABLE VI—Continued

Summary Number 2 (11)

a. Reference:

Betts, Gilbert Lee. "Pupil Achievement and the NS Trait in Teachers." *The Measurement of Teaching Efficiency*. New York: Macmillan Company, 1935, pp. 143–237.

b. Criterion:

Pupil achievement; teacher ratings.

c. Number of persons studied:

Fifty-four teachers and one-thousand two-hundred fourteen pupils.

d. Aspects of teachers or teaching studied:

Teaching efficiency.

e. Data-gathering devices:

A test was designed by the author to measure the NS trait in teachers.

f. Results:

The correlation between pupil achievement and the NS trait in teachers, with initial ability and age constant, is almost six times its probable error.

Summary Number 3 (21)

a. Reference:

Brookover, Wilbur B. "The Relation of Social Factors to Teaching Ability." *Journal of Experimental Education*, 13:191–205, June, 1945.

b. Criterion:

Pupil gains; administrators ratings; pupil ratings.

c. Number of persons studied:

Sixty-six high school teachers.

d. Aspects of teachers or teaching studied:

Social factors thought to be related to teaching efficiency; teacher-pupil relations; teacher's age; marital status; role in community; role in school attitudes; social adjustment; employer's rating.

e. Data-gathering devices:

Indiana United States History Examination; pupil questionnaire; teacher questionnaire; trustee-administrator questionnaire.

f. Results:

Relationship Between 1275 Student Responses to 15 Questions Concerning Their Social Relations with 66 History Teachers and the Teaching Ability of the Teachers as Measured by Mean Gains in History Information

| Questions asked of pupils | Chi-Square | Probability | Mean Gains in History Information: Coefficient of Contingency | Mean Gains in History Information: Direction of relationship |
|---|---|---|---|---|
| Is this teacher friendly to you? | 27.47 | .01— | .20 | Negative |
| Does this teacher join in your recreation? | 26.51 | .01— | .18 | Negative |
| Do you like to have this teacher join in your recreation? | 46.86 | .01— | .23 | Negative |
| Is this teacher helpful to you? | 24.68 | .01— | .17 | Negative |
| Do you confide in this teacher? | 15.98 | .05— | .14 | Negative |
| Do you think this teacher is fair? | 23.88 | .01— | .17 | Negative |
| Do you admire this teacher personally? | 22.11 | .01 | .16 | Negative |
| Do you respect this teacher for academic ability? | 18.06 | .02 | .14 | Curvilinear |
| Do you think this teacher is a sissy? | 33.85 | .01— | .20 | Curvilinear |
| Do you think this teacher is peculiar? | 19.85 | .01 | .15 | Positive |
| Do you think this teacher is good looking? | 17.24 | .03 | .14 | Varies with teacher's age |
| How long have you known this teacher? | 23.04 | .01— | .19 | Varies with teacher's age |

Results of the Tests of Relationship Between Employers' Ratings of the Teaching Ability of 65 Teachers and the Same Employers' Ratings of the Teachers on Seven Traits

| Teachers' traits rated by each employer | Superintendents' ratings of teaching ability: Chi-Square | Probability | Yule's | Direction of relationship |
|---|---|---|---|---|
| Friendliness | 3.478 | .05— | .45 | Positive |
| Cooperativeness | ... | ... | ... | No test |
| Tactfulness | 21.37 | .01— | .87 | Positive |
| Enthusiasm | 17.97 | .01— | .83 | Positive |
| Stimulation of students | 13.30 | .01— | .82 | Positive |
| Understanding of students | 13.30 | .01 | .74 | Positive |
| Fairness | 8.06 | .01 | .78 | Positive |

Results of Relationships Between Social Factors and Pupils Ratings of the Teaching Ability of 68 Teachers

| Indexes of Social Factors | Chi-Square | Probability | $C_{-1}$ | Direction of relationship |
|---|---|---|---|---|
| Teachers' ages | 31.85 | .01— | .20 | Positive |
| Teachers' marital status | 12.57 | .01— | .12 | Curvilinear |
| Length of teachers' tenure in current position | 29.49 | .01— | .21 | Positive |
| Length of pupils' acquaintance with teachers | 84.94 | .01— | .28 | Positive |
| Teacher's previous residence in the community | .61 | .85 | ... | None indicated |
| Frequency of the teacher's church attendance in the community | 6.62 | .40 | ... | None indicated |
| Frequency of the teacher's participation in other community activities | 14.57 | .03 | .17 | Negative |
| Proportion of patrons known by the teacher | 45.52 | .01— | .22 | Positive |
| Type of position: | | | | |
| Principal or not principal | 14.15 | .01— | .15 | Positive |
| Supervisor of extra-curricular activities | 18.77 | .01— | .17 | Curvilinear (negative) |
| Teachers' enjoyment of their work | 14.29 | .01 | .15 | Curvilinear (positive) |
| Extent of teachers' seeking other employment | 5.83 | .15 | ... | None indicated |
| Frequency with which teacher feels depressed | 11.87 | .01— | .14 | Negative |
| Frequency with which teacher feels unappreciated | 24.58 | .01— | .20 | Negative |

TABLE VI—Continued

Summary Number 4 (27)

a. Reference:
Cheydleur, F. D. "Judging Teachers of Basic French Courses by Objective Means at the University of Wisconsin—1919–1943." *Journal of Educational Research*, 39:161–92, 1945.
b. Criterion:
Student mastery of subject material.
c. Number of persons studied:
Nearly five-thousand three-hundred college students over a period from 1921–1928.
d. Aspects of teachers or teaching studied:
Teaching efficiency.
e. Data-gathering devices:
Personal data; no tests applied to the teachers.
f. Results:
1. Of two groups of teachers, one doing graduate work while instructing and the other doing no graduate work while instructing, the latter is the more effective.
2. Of two groups of teachers, no-professorial and professorial, the latter is the more effective. However, there is plenty of evidence to prove that some of our best instruction has been done and is being done by the relatively younger members of our staff.
3. Of two groups of teachers, men and women, while the latter seem to have the edge, the evidence is too close to be conclusive.
4. Of two groups of teachers, foreign and American, the latter is the more effective. (There are a few brilliancy exceptions.)
5. Teaching efficiency is progressively better as classes diminish in size, other things being equal.
6. Grade point average in all subjects and the sectioning of students into upper and lower classes (star and non-star) are more determinant factors in final grades than teaching efficiency or size of classes, although these latter cannot be discounted.
7. Strong teachers show high efficiency on both departmental examinations and on highly standardized foreign language tests. Conversely, weak instructors make a poor showing on both as a rule.

Summary Number 5 (30)

a. Reference:
Courtis, S. A. "The Measurement of the Efficiency of Teaching." *Educational Administration and Supervision*, 18:401–12, September, 1932.
b. Criterion:
Pupil gain.
c. Number of persons studied:
586 sixth and seventh grade pupils.
d. Aspects of teachers or teaching studied:
General teaching efficiency.
e. Data-gathering devices:
None.
f. Results:
Results based upon comparison of the learning curve for incidental learning and direct instruction. The author illustrates his results for two words, "sincerely" and "customary". Word "customary" is used as a control. "Both curves increase at the rate of 4.5 isochrons per year during the period of incidental learning. For the word "sincerely", however, the rate of growth between the sixth and seventh grades jumps to 10.9 isochrons; as normal growth without teaching would have been 4.5 isochrons for "sincerely", as it was for "customary", the difference, 6.4 isochrons represents the change in rate of growth produced by instruction. Now 6.4 is 1.4 times 4.5, the incidental rate of growth. Therefore, it is possible to say, teaching was 1.4 times as effective in this case as the environmental influences.

Summary Number 6 (31)

a. Reference:
Coy, Genevieve L. "A Study of Various Factors Which Influence the Use of the Accomplishment Quotient as a Measure of Teaching Efficiency." *Journal of Educational Research*, 21:29–42, January, 1930.
b. Criterion:
Accomplishment quotients of pupils.
c. Number of persons studied:
Four-hundred pupils, and twenty-six teachers.
d. Aspects of teachers or teaching studied:
Teaching efficiency.
e. Data-gathering devices:
No measures applied to teachers.
f. Results:
Only two out of twenty-six teachers had statistically significant AQ changes with two more approaching statistical significance.

Summary Number 7 (32)

a. Reference:
Crabbs, Lelah Mae. *Measuring Efficiency in Supervision and Teaching*. Contributions to Education, No. 175. New York: Teachers College, Columbia University, 1925.
b. Criterion:
Pupil achievement as measured at the beginning and close of period by use of the accomplishment ratio; Teacher efficiency = (Final subject age ÷ Final mental age × 100) — Initial subject age ÷ Initial mental age × 100.
c. Number of persons studied:
Records of one-thousand one-hundred pupils form basis for the problems studied.
d. Aspects of teachers or teaching studied:
Relationships that exist between ability to teach certain subjects and supervisors estimate of teacher's ability to teach that same subject, between ability to teach skills and supervisors estimate of ability to teach character and everything except character, between professional knowledge and ability to teach and the like.
e. Data-gathering devices:
National Intelligence Test, Scale A, Form K; Herring Revision of the Binet Simon Tests, Form A; Thorndike, McCall, Reading Scale, Forms 4 and 5; Woody McCall Spelling Scale, Lists 1 and 2; Nassau County Supplement to the Hillegas Composition Scale; and Gettsburg edition of the Ayres Penmanship Scale.
f. Results:
The r between composite objective efficiency and supervisory estimate of ability to teach everything except character is .33 for rural and —.25 for urban teachers.

The r between composite objective efficiency and supervisory estimate of ability to build character is .32 for rural and —.12 for urban teachers.

The r between composite objective efficiency and supervisory estimate of ability to teach in general is .32 for rural and —.26 for urban teachers.

There is very high intercorrelation between the three joint rankings given the rural teachers by the three supervisors. The r's are .99, .99, and .99. The mean of similar rankings of seven other supervisors in different situations gave r's of .88, .78 and .81.

The rural teachers were tested with the Steele–Herring test of professional knowledge and the scores made were correlate with this composite objective efficiency scores. The r is .05.

The r between professional knowledge and ranking by supervisors for general teaching ability is .40.

Summary Number 8 (34)

a. Reference:
Davis, H. McVey. *The Use of State High School Examinations as an Instrument for Judging the Work of Teachers.* Contributions to Education, No. 611. New York: Teachers College, Columbia University, 1934, 101 pp.

b. Criterion:
State Board Tests of Pupil Achievement in the various subjects for Minnesota.

c. Number of persons studied:
157 algebra teachers, 147 plane geometry teachers, 175 American history, 78 ancient history, 172 modern history, 172 social science, 72 Latin I, 77 Latin II, 179 English IV, 107 chemistry, 175 general science, 180 biology teachers.

d. Aspects of teachers or teaching studied:
Ability of teachers relative to their preparation in the field taught as measured by the percentage of failures as determined by the Minnesota State Board tests of pupil achievement.

e. Data-gathering devices:
Data was copied from various sources: The State of Minnesota Department of Education Annual Report relating to qualifications of teachers in four year high schools and high school departments; State of Minnesota Department of Education; State Board Examination, class lists; summary of State Board examinations on file in the Office of the State Department; teachers daily class record books; teachers' retirement records; teachers' certificates; and teachers' application blanks and various other records of teacher qualifications kept by local school superintendents.

f. Results:

Teachers who have been employed in a given school for some time are more successful in passing pupils through state tests than are teachers who have been employed in the same school for a shorter period of time. The schools which achieve the best results in state tests, however, are the schools with markedly high teacher turnover. It would seem more likely that the tenure of the teacher is a result of her success as measured by State Board tests than that success in State Board Tests is a result of increased tenure.

When teachers with more than two years of experience are considered, the individuals who are most successful in passing pupils through State Board Tests are found to be the teachers who are paid the better salaries. This relationship does not hold true, however, for teachers in the first year of their teaching experience. For such teachers employers have had no opportunity to determine results from state tests. It may be that in the relationship between salary of the teacher and success of pupils in state tests, salary is more largely a resultant than a determinant.

Teachers with two or more years of experience were more successful in having their pupils pass the Minnesota State Board test than did teachers with one year of experience. Here it was found that teachers with more than two years had little or no advantage over those with two years experience as measured by the criterion in this study.

Summary Number 9 (44)

a. Reference:
Gotham, R. E. "Personality and Teaching Efficiency." *Journal of Experimental Education,* 14: 157–65, December, 1945.

b. Criterion:
Pupil achievement; composites of scores from tests of qualities commonly associated with teacher success; and composites of teacher ratings.

c. Number of persons studied:
Forty-seven teachers and three-hundred thirty-eight pupils in one and two room rural schools.

d. Aspects of teachers or teaching studied:
Personality.

e. Data-gathering devices:
The American Council on Education Psychological Examination.
The Teachers College Psychological Examination.
American Council Civics and Government Test.
Stanford Teaching Aptitude: T. R. (Teaching and research ability).

Mean Percentage of Pupil Failure for Classes in Various Subjects Related to the Failure in All Subjects in the Schools in Which the Pupils Were Enrolled

| Subject | Mean Percentage of Pupil Failure | | | | | | Differences of Differences |
|---|---|---|---|---|---|---|---|
| | Qualified Teacher Group | | | Unqualified Teacher Group | | | |
| | Subject | School | Difference | Subject | School | Difference | |
| Algebra | 31.13 | 26.00 | 5.13 | 29.60 | 26.42 | 3.18 | —1.95 |
| American History | 30.79 | 26.04 | 4.75 | 30.82 | 28.18 | 2.64 | —2.11 |
| Ancient History | 24.58 | 25.44 | —0.84 | 25.21 | 28.79 | —3.58 | —2.72 |
| Biology | 25.73 | 26.09 | —0.36 | 27.12 | 28.43 | —1.31 | —0.95 |
| Chemistry | 28.89 | 26.11 | 2.78 | 31.58 | 25.33 | 6.25 | 3.47 |
| English IV | 28.38 | 26.62 | 1.76 | 23.74 | 28.52 | —4.78 | —6.54 |
| General Science | 24.76 | 25.77 | —1.01 | 26.39 | 28.83 | —2.44 | —1.43 |
| Geometry | 25.83 | 26.82 | —0.99 | 25.32 | 27.38 | —1.06 | —0.07 |
| LatinI | 29.40 | 24.92 | 4.48 | 37.60 | 27.60 | 10.00 | 5.52 |
| LatinII | 26.12 | 24.89 | 1.23 | 41.50 | 28.50 | 13.00 | 11.77 |
| Modern History | 26.48 | 25.95 | 0.53 | 41.66 | 30.28 | 11.38 | 10.85 |
| Social Science | 19.42 | 26.01 | —6.59 | 27.43 | 28.52 | —1.09 | 5.50 |

TABLE VI—Continued

Stanford Teaching Aptitude: T. A. (Teaching and administrative ability).
Yeager—Scale for Measuring Attitude Toward Teachers and the Teaching Profession).
Lewerenz–Steinmetz—Orientation Test.
Torgerson—Test of Pupil-Teacher Relationship.
Morris Trait Index L.
Wrightstone—Scale of Civic Beliefs.
Hartman—Test of Social Attitudes of Secondary School Teachers.
Part I, Information (Hartman).
Part II, Attitude (Hartman).
Three tests of personality were administered to each teacher:

1. Bernreuter Personality Inventory.
2. Washburne Social Adjustment Inventory.
3. Rudisill Scale for the Measurement of the Personality of Elementary School Teachers.

Three Teacher Rating scales were used:

1. Michigan Teacher Rating Scale.
2. Torgerson Diagnostic Teacher Rating Scale of Industrial Activities.
3. Almy–Sorenson Rating Scale for Teachers.

Unstandardized Personality Rating Scales:

1. An unstandardized four-point Personality Rating Scale.
2. An unstandardized thirty-three point Trait Scale for Evaluating the Personal Fitness of Teachers.

f. Results:

1. No significant relationship is observed between the criterion of pupil change and the three personality inventories employed, namely:
   a. The Bernreuter Personality Inventory
      N—Neurotic Tendency (—.14)
      S—Self Sufficiency (—.11)
      D—Dominance-Submission (.04)
   b. The Washburne Social Adjustment Inventory (.06)
   c. The Rudisill Scale for the Measurement of the Personality of Elementary School Teachers (.03)
2. No significant relationship is observed between the criterion of pupil change and the various personal traits measured individually by the Rudisill Scale for the Measurement of the Personality of Elementary School Teachers, with the possible exception of interest in work (—.35), progressiveness (.30), refinement (.25), and adaptability (—.23).
3. A moderately significant relationship (namely .47) is observed between the Washburne Social Adjustment Inventory and the criterion of teacher tests. No significant relationship was observed with respect to the two remaining tests.
4. A moderate relationship is also observed (namely .40) between the Washburne Social Adjustment Inventory and the criterion of teacher ratings.
5. Some relationship is observed between the criterion of pupil change and the following teacher rating scales:
   a. Almy–Sorenson Rating Scale for Teachers (.36)
   b. Michigan Teacher Rating Scale (.39)
   c. Torgerson Diagnostic Teacher Rating Scale (.43)
   d. An unstandardized thirty-three traits Scale for Evaluating the Personal Fitness of Teachers (.35)
   e. An unstandardized four-point Personality Rating Scale (.30)
6. No significant relationship was observed between the tests of personal qualities and the personality rating (.13)
7. A multiple correlation of .40 was found between a composite of the teacher personality measures and pupil change. Because of the preliminary character of the work in this area no advantage is gained from application of the multiple correlation technique.

Summary Number 10 (52)

a. Reference:
Hellfritzsch, A. C. "A Factor Analysis of Teacher Abilities." *Journal of Experimental Education*, 14: 166–69, December, 1945.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
Twenty-eight teachers in study one; fifty-seven teachers in study two.

d. Aspects of teachers or teaching studied:
Intelligence, knowledge of subject, leadership, social adjustment, teaching efficiency, civic beliefs, personal fitness, personality, knowledge of educational objectives, attitudes towards teachers and teaching, ability to organize research materials, teaching aptitude, social attitudes, knowledge of mental hygiene practice, teacher-pupil relations.

e. Data-gathering devices:
American Council on Education Psychological Examination for College Freshmen, 1936 Edition.
The Teachers College Psychological Examination, 1934 Edition.
Psychological Examination (Teachers College), Form C, 1938 Edition.
American Council Civics and Government Test, Form B.
Morris Trait Index L.
Washburne Social Adjustment Inventory, Sapich Edition.
Torgerson Diagnostic Teacher Rating Scale of Instructional Activities.
Almy–Sorenson Rating Scale for Teachers.
Michigan Teacher Rating Scale, Investigators ratings.
Michigan Teacher Rating Scale, Average of three ratings.
Lowerenz–Steinmetz, Orientation Test Concerning Fundamental Aims of Education, 1935 Revision.
Yeager, Scale for Measuring Attitude Toward Teachers and the Teaching Profession.
Wrightstone, Abilities to Organize Research Material.
Bernreuter Personality Inventory.
Stanford Educational Aptitudes Test: Teaching versus Administrative Ability.
Stanford Educational Aptitudes Test: Teaching versus Research Ability.
Hartmann, Social Attitudes of Secondary School Teachers: Parts I and III.

TABLE VI—Continued

Torgersons, Theory and Practice of Mental Hygiene.
Torgerson, Teaching Problems and Teaching Processes Test.
A Scale for Evaluating the Personal Fitness of Teachers. Average of three ratings.
Personality Rating Scale. Average three ratings.
Hartman, Social Attitudes of Secondary School Teachers Test: Part I and III.
Wrightstone, Scale of Civic Beliefs.
Torgerson, A Test of Teacher-Pupil Relationships.

f. Results:
The common factors were:
General knowledge and mental ability.
Teacher rating scale factor.
Personal-emotional adjustment.
Eulogizing attitude toward the teaching profession.

Summary Number 11 (59)

a. Reference:
Jayne, D. D. "A Study of the Relationship Between Teaching Procedures and Educational Outcomes." *Journal of Experimental Education*, 14: 101–34, December, 1945.

b. Criterion:
Measurable pupil change.

c. Number of persons studied:
First investigation 28 teachers and their classes.
Second investigation ten teachers and ninety-five pupils.

d. Aspects of teachers or teaching studied:
Observable teacher activities of the more specific sort and the changes produced in pupils as measured by tests.

e. Data-gathering devices:
Recordings were made of lessons and later typed out and studied.
Henmon-Nelson Test of Mental Ability.
Terman Group Test of Mental Ability for Grades 7 to 12.
Pressey Diagnostic Reading Test.
Test prepared by author on Alaska.

f. Results:

Coefficients of Correlation Between Various Composite Index Scores and Criterion Scores

| | Composite I.M.D.* from standard scores | Composite I.M.D. from weighted standard scores | Composite I.I.R.* from standard scores | Composite I.I.R. from weighted standard scores |
|---|---|---|---|---|
| U. W. H. | .63 | .81 | .19 | .13 |
| U | .63 | .99 | —.35 | .02 |
| Expert Opinion (First study) | —.64 | —.75 | —.19 | —.61 |
| Immediate recall | —.66 | —.67 | .82 | .86 |
| Delayed recall | —.55 | .68 | .53 | .51 |
| Expert opinion (Second Study) | .32 | .42 | —.31 | —.18 |

I.M.D.—Index of Meanful discussion
I.I.R.—Index of immediate recall
UYUnit test; W—Wrightstone; H—Hill

Summary Number 12 (66)

a. Reference:
LaDuke, C. V. "The Measurement of Teaching Ability, Study No. 3." *Journal of Experimental Education*, 14:75–100, September, 1945.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
Two hundred pupils and thirty-four teachers.

d. Aspects of teachers or teaching studied:
Intelligence, attitude toward teachers and teaching, knowledge of theory and practice or mental hygiene, educational conservatism or progressivism, social proficiency, personality.

e. Data-gathering devices:
American Council on Education Psychological Examination for College Freshmen.
Theory and Practice of Mental Hygiene (Torgerson).
A Scale for Measuring Attitudes Toward Teachers and the Teaching Profession (Yeager).
Statements About Education (Harnly).
A Test of Social Proficiency.
Torgerson's Diagnostic Teacher Rating Scale of Instructional Activities.
Almy–Sorenson Rating Scale for Teachers.

f. Results:
Intelligence of teachers as measured by the total score and part scores on the American Council Psychological Examination is significantly related to teaching efficiency as measured here, .61.
Professional knowledge of the theory and practice of mental hygiene is positively but not significantly related to teaching efficiency, .35.
Whether a teacher is liberal or conservative with reference to educational objective purposes, and policies, or not seems to make little difference to her efficiency. There is a tendency for the efficient teacher to be conservative in her teaching methods, —.32.
The teacher's attitude toward her profession or toward her fellow teachers as herein measured showed little relationship to her efficiency, .16.
Teachers who are the more considerate of others as here measured tend to be inefficient, although the relationship is not statistically significant, .35.

Summary Number 13 (75)

a. Reference:
McCoard, W. B. "Speech Factors as Related to Teaching Efficiency." *Speech Monograph*, 11:53–64, 1944.

b. Criterion:
Pupil gain.

c. Number of persons studied:
40 teachers.

d. Aspects of teachers or teaching studied:
Speech factors as related to teaching efficiency.

e. Data-gathering devices:
Almy–Sorenson Rating Scale for Teachers; Michigan Education Association Scale; Torgerson Diag-

TABLE VI—Continued

nostic Teacher Rating Scale of Instruction Activities; Personality Rating Scale; Personal Fitness Scale.

Figures for these ratings were obtained from research done by R. E. Gotham, and G. E. Carlson. The recordings of reading and speaking were made of each case studied.

f. Results:

Correlations Between Teaching Criterion Scores and Speech Scores

| | Reading | Speaking |
|---|---|---|
| General Effectiveness | .42 | .32 |
| Communication of Ideas | .41 | .29 |
| Communication of Emotion | .45 | .37 |
| Distinctiveness and General Pronunciation Level | .35 | .25 |
| Pitch | .34 | .36 |
| Variation of Pitch | .45 | .42 |
| Quality | .40 | .32 |
| Variation of quality | .46 | .40 |
| Volume | .41 | .38 |
| Variation of Volume | .45 | .37 |
| Rate | .42 | .32 |
| Variation of Rate | .46 | .37 |
| Phrasing | .44 | .28 |
| Variation in Phrasing | .44 | .33 |
| Total | .46 | .36 |

The study under the conditions which it was performed indicate that a good teacher is likely to be a good teacher partly because she possesses better speech.

Summary Number 14 (80)

a. Reference:
Mathews, Lee H. "An Item Analysis of Measures of Teaching Ability." *Journal of Educational Research*, 33:576–80, April, 1940.

b. Criterion:
A composite index derived from the measurable changes produced in seventh and eighth grade pupils by fifty-seven teachers of social studies.

c. Number of persons studied:
Fifty-seven one-room rural teachers.

d. Aspects of teachers or teaching studied:
Teaching ability as measured by tests.

e. Data-gathering devices:

Teacher Tests

American Council on Education Psychological Examination, 1936 Ed.
The Teachers College Psychological Examination, 1934 Ed.
The American Council Civics and Government Test, Form B.
The Morris Trait Index, L.
The Torgerson Test of Teacher-Pupil Relationship.
The Bernreuter Personality Inventory.
The Washburn Social Adjustment Inventory, Sapich Edition.
The John Dewey Society Test of Social Attitudes of Secondary School Teachers.
The Lewerenz–Steinmetz Orientation Test, Concerning Fundamental Aims of Education.
The Yeager Scale for Measuring Attitude Towards Teachers and the Teaching Profession.
The Wrightstone Scale of Civic Beliefs.

f. Results:
Out of 1675 items in all tests given teachers only sixty-eight items or slightly over four per cent were found to possess statistical significance in terms of the criterion employed. One reason for this result might be ascribed to the fact that the fact that the items were poorly selected or poorly stated. A second, and no doubt more probable reason, is that an individual item may measure such a very narrow range of behavior that when used as a measure of teaching ability it cannot discriminate between groups of known divergence in ability. The third reason lies possibly in the realm of the organization of human abilities. The teacher may bring her whole self, as a unit, to each successive teaching situation such that an individual test item may never constitute a satisfactory measure of any so-called trait or quality. The criterion of teaching ability employed in this investigation may not have been an adequate one.

Summary Number 15 (86)

a. Reference:
Moss, F. A., Loman, William and Hunt, Thelma. "Impersonal Measurement of Teaching." *Educational Record*, 10:40–50, January, 1929.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
Six-thousand six-hundred sixty-seven first year college students.

d. Aspects of teachers or teaching studied:
Teaching aptitude.

e. Data-gathering devices:
A chemistry test (name not given) prepared by Moss, Loman, Middleton, and Hubbard and covering the following areas: (1) elements and compounds, (a) history, (b) occurrence, (c) physical properties, (d) chemical properties, (e) uses, (f) laboratory preparation, (g) commercial preparation; (2) principles; (3) formulas; (4) equations; and (5) problems.

f. Results:
Validity of test is .6 when test scores are correlated with elementary grades assigned by instructor.

Summary Number 16 (96)

a. Reference:
Rolfe, J. F. "The Measurement of Teaching Ability, Study No. 2." *Journal of Experimental Education*, 14:52–74, September, 1945.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
Forty-seven teachers, three-hundred thirty-eight pupils in one room rural schools.

d. Aspects of teachers or teaching studied:
Intelligence, knowledge of subject matter, personality, teacher-pupil relations, aptitudes, attitudes toward teachers and teaching, socio-economic status, social attitudes, leadership adjustment, personal fitness, teaching efficiency, teaching aptitudes, age, experience, professional training.

e. Data-gathering devices:
See Results.

TABLE VI—Continued

f. Results:

Correlations of Teacher Measures with Criterion

| | |
|---|---|
| 1. American Council on Education Psychological Examination for College Freshmen, 1936 Edition | —.10 |
| 2. Psychological Examination Prepared for the Teachers College Personnel Association, Form C-1938 Edition | .06 |
| 3. American Council Civics and Government Test, Form B for High Schools and Colleges | —.01 |
| 4. Hartmann, Social attitudes of Secondary School Teachers (Information) | .01 |
| 5. Bernreuter, Personality Inventory, Bn | —.14 |
| 6. Bernreuter, Personality Inventory, Bd | .04 |
| 7. Bernreuter, Personality Inventory, Ba | —.11 |
| 8. Morris Trait Index "L" | —.17 |
| 9. Washburne, Social Adjustment Inventory, Sapich Edition | .06 |
| 10. A Scale for Evaluating the Personal Fitness of Teachers, unpublished material, Univeristy of Wisconsin | .35 |
| 11. Personality Rating Scale, unpublished materials, Univeristy of Wisconsin | .30 |
| 12. Torgerson Diagnostic Teacher Rating Scale of Instructional Activities | .43 |
| 13. Almy–Sorenson Rating Scale for Teachers | .36 |
| 14. Michigan Teacher Rating Scale | .39 |
| 15. Stanford Educational Aptitudes Test, T-A | .08 |
| 16. Stanford Educational Aptitudes Test, A-R | —.15 |
| 17. Stanford Educational Aptitudes Test, T-R | —.13 |
| 18. Hartman, Social Attitudes of Teachers | .38 |
| 19. Wrightstone, Scale of Civic Beliefs, Forms A and B combined | .29 |
| 20. Lowerenz–Steinmetz, Orientation Test, 1935 Revision | —.06 |
| 21. Yeager, Scale for Measuring Attitudes Toward Teachers and the Teaching Profession | .22 |
| 22. A Test for Teacher–Pupil Relationship by Torgerson, Ullavik and Wahlstrom | .22 |
| 23. Sims Score Card for Socio–Economic Status, Form C | —.15 |
| 24. Age of the teacher | .01 |
| 25. Teaching experience—in years | .10 |
| 26. Professional training in years above high school | —.09 |
| 27. Size of school—number of pupils | .31 |
| 28. Size of class—number of pupils | .10 |
| 29. Per-pupil cost per year | —.06 |
| 30. Salary of teacher per month | .22 |

Summary Number 17 (97)

a. Reference:
Rostker, L. E. "The Measurement of Teaching Ability, Study No. 1." *Journal of Experimental Education*, 14:6–51, September, 1945.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
28 teachers; 375 pupils in non-departmentalized rural schools.

d. Aspects of teachers or teaching studied:
Intelligence, knowledge of subject matter, social attitudes, ability to organize research material, attitude toward teachers and teaching, knowledge of teaching techniques, theory and practice of mental hygiene, personality, leadership, social adjustment, educational aptitude.

e. Results:

Summary Number 18 (106)

a. Reference:
Seyfert, W. C., and Tyndal, B. S. "An Evaluation of Differences in Teaching Ability." *Journal of Educational Research*, 28:10–15, September, 1934.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
Two groups of 73 girls each; two groups of 107 mixed.

Correlations of Teacher Measures with Composite Criterion

| Test | Criterion |
|---|---|
| 1. Wrightstone, Abilities to Organize Research Material, Revised Form, Teachers College, Columbia University, New York, N. Y. | .58 |
| 2. American Council Psychological Examination, 1936 Ed., American Council on Education, Washington, D. C. | .57 |
| 3. Social Attitudes of Secondary-School Teachers, John Dewey Society, New York, N. Y. | .52 |
| 4. Yeager, Scale For Measuring Attitude Towards Teachers and the Teaching Profession, Teachers College, Columbia University, New York, N. Y. | .45 |
| 5. Torgerson, Theory and Practice of Mental Hygiene, University of Wisconsin, Madison, Wisconsin | .45 |
| 6. Teachers College of Psychological Examination, State Teachers College, St. Cloud, Minnesota, 1934 Ed. | .40 |
| 7. Test on Community Planning, Form A, University of Wisconsin, Madison, Wisconsin | .39 |
| 8. Health Test, Unit 1, Form A, University of Wisconsin, Madison, Wisconsin | .37 |
| 9. American Council Civics and Government Test, Form B, World Book Company, Yonkers-on-Hudson, N. Y. | .36 |
| 10. Torgerson Diagnostic Rating Scale of Instructional Activities, Public School Publishing Company, Bloomington, Illinois | .34 |
| 11. The Bernreuter Personality Inventory, Bn, Stanford University Press, Stanford University, California | —.31 |
| 12. Lewerenz–Steinmetz, Orientation Test, Southern California School Book Depository, Los Angeles, California, 1935 | .30 |
| 13. Bernreuter Personality Inventory, Fc | —.27 |
| 14. Almy–Sorenson, Rating Scale for Teachers, Public School Publishing Co., Bloomington, Illinois. (Investigator) | .26 |
| 15. Bernreuter Personality Inventory, Bd | .25 |
| 16. Michigan Teacher Rating Scale, Michigan Education Association, Lansing, Michigan. (Investigator) | .23 |
| 17. Morris Trait Index—L, Public School Publishing Company, Bloomington, Illinois | .20 |
| 18. Bernreuter Personality Inventory, Ba | .20 |
| 19. Michigan Teacher Rating Scale. (Supervisor) | .15 |
| 20. Bernreuter Personality Inventory, Sa | —.13 |
| 21. Washburne Social Adjustment Inventory, Syracuse University, Syracuse, New York, Sapich Edition | .13 |
| 22. Torgerson, Teaching Problems (Mimeo.), University of Wisconsin, Madison, Wisconsin | .11 |
| 23. Stanford Educational Aptitudes Test, Stanford University Press, Stanford University, California, Test T-A | .10 |
| 24. Stanford Educational Aptitudes Test, Test A-R | .04 |
| 25. Almy–Sorenson, Rating Scale for Teachers, (Supervisor) | —.02 |
| 26. Stanford Educational Aptitudes Test. Test T-R | .02 |
| 27. Torgerson Diagnostic Rating Scale of Instructional Activities. (Supervisor) | —.01 |

TABLE VI—Continued

d. Aspects of teachers or teaching studied:
Relative teaching merit based on pupil differences in mental age before and after teaching.

e. Data-gathering devices:
Ruch–Popenoe General Science Test; Rulon Science Test.

f. Results:

*V. Studies based upon concensus of opinions as to the characteristics of and prerequisites to efficiency*

Summary Number 1 (1)

a. Reference:
Albert, H. R. "An Analysis of Teacher Rating by Pupils in San Antonio, Texas." *Educational Administration and Supervision,* 27:267–74, April, 1941.

Mean Chronological Ages and Terman Scores for Two Groups of 73 Girls Each

| Teacher | No. Cases | Mean C.A. in Months | S.D. | Mean Terman Score | S.D. |
|---|---|---|---|---|---|
| A | 73 | 174.91 | 7.42 | 86.56 | 26.9 |
| Z | 73 | 175.21 | 6.87 | 86.42 | 27.5 |

Mean and Median Scores for Each of Two Groups of 73 Girls Each on the Ruch–Popenoe General Science Test

| Teacher | No. Cases | Mean | S.D. | S.Dm | Median |
|---|---|---|---|---|---|
| A | 73 | 20.11 | 5.97 | 0.70 | 19.50 |
| Z | 73 | 17.17 | 5.29 | 0.62 | 16.55 |

Diff. of Means = 2.94 C.R. of Diff. = 4.2 rmAmZ = .44

Mean and Median Scores for Each of Two Groups of 73 Girls Each on the Rulon Science Test

| Teacher | Mean | S.D. | S.D.m | Median |
|---|---|---|---|---|
| A | 31.73 | 18.10 | 2.12 | 28.95 |
| Z | 26.21 | 16.85 | 1.91 | 22.05 |

Diff. of Means = 5.52 C.R. of Diff. = 2.9 rmAmZ = .56

Mean Chronological Ages and Rulon Test Scores for Two Groups of 107 Pupils Each

| Teacher | No. Cases | Mean C.A. in Months | S.D. | Rulon Scores | S.D. |
|---|---|---|---|---|---|
| A | 107 | 175.59 | 7.71 | 31.81 | 19.4 |
| Z | 107 | 175.89 | 7.29 | 31.91 | 19.5 |

Mean Terman Scores for Two Groups of 107 Students Each

| Teacher | Mean Score | S.D. | S.D.m |
|---|---|---|---|
| A | 92.44 | 30.4 | 2.94 |
| Z | 96.74 | 30.2 | 2.92 |

Diff. of Means = 4.30 C.R. Diff. = 1.6 rmAmZ = .57

Summary Number 19 (130)

a. Reference:
Von Eschen, D. R. "The Improvability of Teachers in Service." *Journal of Experimental Education,* 14:135–156, December, 1945.

b. Criterion:
Pupil achievement.

c. Number of persons studied:
57 teachers, 24 of which were in the experimental group.

d. Aspects of teachers or teaching studied:
Knowledge of subject; social attitudes; teacher-pupil relationship; attitudes toward teachers and teaching.

e. Data-gathering devices:
American Council Civics and Government Test, Form B.
Hartman, Social Attitudes of Secondary Teachers Part I.
Hartman, Social Attitudes of Secondary Teachers Part II.
Torgerson, Test of Teacher-Pupil Relationship.
Yeager, Attitude Toward Teachers and Teaching.

f. Results:

| | Difference Means | Critical Ratio |
|---|---|---|
| American Council Civics and Government | 2.87 | .76 |
| Social Attitudes of Secondary teachers—Part I (Hartman) | .54 | .36 |
| Social Attitudes of Secondary teachers—Part II (Hartman) | 12.45 | 3.11 |
| Test of Teacher–Pupil Relationship (Torgerson) | 11.43 | 2.69 |
| Attitude Toward Teachers and Teaching (Yeager) | .03 | .01 |

b. Criterion:
Opinions of pupils.

c. Number of persons studied:
Seventy-eight teachers rated by one thousand-five hundred-eighty-eight high school pupils.

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
Questionnaire.

f. Results:
Characteristics deemed most important by pupils:
1. Helpful
2. Friendly
3. Kind
4. Good disposition
5. Sense of humor
6. Fair

Summary Number 2 (6)

a. Reference:
Antell, Henry. "An Inventory of Teacher Understandings as a Guide Toward Their Improvement in Service." *Educational Administration and Supervision,* 31:359–66, September, 1945.

TABLE VI—Continued

b. Criterion:
No experimental study.

c. Number of persons studied:
Two-hundred teachers.

d. Aspects of teachers or teaching studied:
Teacher understandings and attitudes.

e. Data-gathering devices:
Questionnaire on teacher understandings and attitudes.

f. Results:
Relationships found:
Results uses as a basis for evolving principles of supervision for in-service training of teachers. No correlations made.

Summary Number 3 (8)

a. Reference:
Barr, A. S. and Emans, Lester M. "What Qualities Are Prerequisite to Success?" *The Nation's Schools*, 6:60–64, September, 1930.

b. Criterion:
Concensus of opinions.

c. Number of persons studied:
Two-hundred and nine rating scales.

d. Aspects of teachers or teaching studied:
See summary of findings.

e. Data-gathering devices:
An analysis of rating scales.

f. Results:
For summary see Table II.

Summary Number 4 (12)

a. Reference:
Bird, G. E. "Pupils' Estimates of Teachers." *Journal of Educational Psychology*, 8:35–40, 1917.

b. Criterion:
Pupils' statements.

c. Number of persons studied:
253 high school boys; 139 high school girls; 150 normal school girls.

d. Aspects of teachers or teaching studied:
Characteristics of a good teacher.

e. Data-gathering devices:
List of 5 or 6 best qualities submitted by students.

f. Results:

Summary Number 5 (15)

a. Reference:
Blyler, Dorothea. "Pretraining Selection of Teachers With Emphasis on the Field of Music." *Educational Administration and Supervision*, 29:129–50, March, 1943.

b. Criterion:
Present status in the institutions studied.

c. Number of persons studied:
93 institutions which teach music.

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
Questionnaire sent to the schools of the National Association of Schools of Music and the state universities.

f. Results:

Summary of Replies to Music Questionnaires

| Basis of Admission: | Per cent |
|---|---|
| a. Tests of Musical talent | |
| 1. Seashore Measures | 36.5 |
| 2. Kwalwasser–Dykema Tests | 19.3 |
| b. Intelligence tests | 34.4 |
| c. Scholastic aptitude tests | 20.4 |
| d. Scholarship (Based on 46 schools selecting on entrance) | 47.6 |
| e. Personality | 49.2 |
| f. Health | 45.1 |
| g. Personal appearance | 35.4 |
| h. English usage | 35.5 |
| i. Contemporary affairs | 20.4 |
| j. Professional attitude | 6.5 |
| k. Speech | 7.4 |
| l. Questionnaire on musical training and interests | 5.4 |

Summary Number 6 (18)

a. Reference:
Bousfield, Weston Ashmore. "Students' Ratings of Qualities Considered Desirable in College Professors." *School and Society*, 51:253–56, February 24, 1940.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
First part of study: 61 undergraduates.
Second part of study: 507 undergraduates (171 women and 336 men).

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
Questionnaire.

Pupils' Estimates of Teachers

| Qualities | 150 Normal School Girls | | 253 High School Boys | | 139 High School Girls | | |
|---|---|---|---|---|---|---|---|
| | Rank | Per Cent Frequency | Rank | Per Cent Frequency | Rank | Per Cent Frequency | Average Frequency |
| Kindness | 1 | 94 | 2 | 51 | 1 | 75 | 73 |
| Fairness | 2 | 54 | 1 | 56 | 5 | 44 | 51 |
| Sociability | 3 | 50 | 7 | 17 | 10 | 7 | 25 |
| Sense of humor | 4 | 45 | 5 | 22 | 4 | 47 | 38 |
| Good temper | 5 | 30 | 6 | 19 | 8 | 14 | 21 |
| Discipline | 6 | 23 | 3 | 35 | 2 | 52 | 37 |
| Neatness | 7 | 15 | 10 | 11 | 7 | 27 | 18 |
| Patience | 8 | 13 | 4 | 26 | 3 | 50 | 30 |
| Preparation | 9 | 11 | 8 | 15 | 9 | 14 | 13 |
| Clearness of explanation | 10 | 0 | 9 | 15 | 6 | 43 | 19 |

TABLE VI—Continued

f. Results:

Qualities Listed by 61 Students as Being Most Desirable in College Professors*

| | Frequencies | | Frequencies |
|---|---|---|---|
| 1. Interest in students | 37 | 11. Well-organized material | 12 |
| 2. Fairness | 28 | 12. Interesting presentation of material | 11 |
| 3. Pleasing personality | 27 | 13. Appearance | 10 |
| 4. Humor | 20 | 14. Helpfulness | 8 |
| 5. Mastery of subject | 18 | 15. Sincerity | 8 |
| 6. Good voice | 17 | 16. Wide range of information | 7 |
| 7. Tolerance | 14 | 17. Enthusiasm | 6 |
| 8. Clearness | 13 | 18. Keeness of intellect | 6 |
| 9. Effective teaching | 13 | 19. Miscellaneous | 38 |
| 10. Poise | 12 | | |

*Statistically significant items have frequencies of 11 or above.

Summary Number 7 (26)

a. Reference:
Charters W. W. and Waples, Douglas. *The Commonwealth Teacher-Training Study*. Chicago: University of Chicago Press, 1929.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
Over one hundred administrators assisted in collecting data from several thousand teachers in service attending summer schools, and an equally large number of administrators assisted in collecting data from other groups of people.

d. Aspects of teachers or teaching studied:
Summary (Table IV).

e. Data-gathering devices:
Questionnaires.

f. Results:
See Table IV.

Summary Number 7a (34a)

a. Reference:
Davis, Robert A. and others. "The Teaching Problems of 1075 Public School Teachers." *Journal of Experimental Education*, 9:41–60, September, 1940.

b. Criterion:
Expressed needs and difficulties of teachers.

c. Number of persons studied:
1075 Colorado school teachers.

d. Aspects of teachers or teaching studied:
See findings below.

e. Data-gathering devices:
Letter and questionnaire.

f. Results:

| Types of Problem | Total |
|---|---|
| Motivation | 565 |
| Testing and evaluation | 359 |
| Diagnosing and correcting difficulties | 267 |
| Individual differences | 230 |
| Modes of presentation | 242 |
| Relationships with administration | 73 |
| Transfer of training | 77 |
| How to study | 85 |
| Lack of materials and equipment | 64 |
| Racial differences | 23 |
| Participation in class | 43 |
| Discipline | 53 |
| Curricular and extra curricular activities | 56 |
| Guidance | 25 |
| Thoroughness | 54 |

Summary Number 8 (39)

a. Reference:
Edmiston, Robert W., and Cahill, C. M. "What Does the Rural Community Expect of Its Teachers?" *Educational Administration and Supervision*, 26:98–102, February, 1940.

b. Criterion:
Superintendents ratings acquired by questionnaires.

c. Number of persons studied:
126 superintendents representing 894 rural schools.

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
Questionnaire.

f. Results:
In order to provide a readily interpreted summary of the collected data, an index of desirability for each item was provided by weighting the various questionnaire ratings so that, an index of 1 = grave hindrance, unemployable; 2 = handicap, undesirable; 3 = unimportant, immaterial; 4 = advantageous, desired; 5 = invaluable, required.

General Ranking of Times Weighted to Show Desirability and Undesirability as Designated by Rural Superintendents

| Items | Index of desirability | Rank |
|---|---|---|
| Completion of undergraduate training for high school | 4.7015 | 1 |
| Evidence of personal interest in education | 4.5713 | 2 |
| Men for superintendent of schools | 4.5120 | 3 |
| Membership in local educational group | 4.4677 | 4 |
| Membership in state educational group | 4.4492 | 5 |
| Membership in county educational group | 4.4480 | 6 |
| Educational–professional magazines | 4.2880 | 7 |
| Men for Senior H. S. principals | 4.2499 | 8 |
| Training beyond minimum requirements | 4.1680 | 9 |
| Broad training | 4.1531 | 10 |
| Defective teeth (noticeable) | 1.9112 | 80 |
| Men teachers smoking publicly | 1.880 | 81 |
| Women smoking at clubs and in other private and semi-private groups | 1.8800 | 82 |
| Hunchback | 1.8211 | 83 |
| Defective hearing | 1.7920 | 84 |
| Crippled, using crutches | 1.7723 | 85 |
| Men using small quantities of alcoholic drinks at clubs and in private and semi-private groups | 1.7024 | 86 |
| Women using small quantities of alcoholic drinks in private and semi-private groups | 1.5520 | 87 |
| Women teachers smoking publicly | 1.1174 | 89 |
| Effect of women becoming married during school on employment as teacher | 1.0304 | 90 |

TABLE VI—Continued

Summary Number 9 (40)

a. Reference:
Engelhart, Max D. and Tucker, Ledyard R. "Traits Related to Good and Poor Teachers." *School Review*, 44:28–33, January, 1936.
b. Criterion:
Concensus of opinion.
c. Number of persons studied:
224 high school pupils.
d. Aspects of teachers or teaching studied:
See below.
e. Data-gathering devices:
Check list of traits.
f. Results:

Traits Correlating Significantly and Positively with Quality of Teaching According to Traits Named by 224 High School Pupils as Characteristic of Good Teachers

| Trait | Tetrachoric Coef. of Correlation |
|---|---|
| 1. Good judgment | .93 |
| 2. Clear in explanation | .88 |
| 3. Respecting others opinions | .86 |
| 4. Sincere | .83 |
| 5. Impartial | .83 |
| 6. Fair | .82 |
| 7. Appreciative | .80 |
| 8. Interested in pupils | .80 |
| 9. Broad-minded | .80 |
| 10. Knows subject | .79 |
| 11. Common sense | .79 |
| 12. Prompt | .79 |
| 13. Intelligent | .78 |
| 14. Sportsmanlike | .78 |
| 15. Interested in pupil activity | .78 |
| 16. Good natured | .77 |
| 17. Good enunciation | .77 |
| 18. Considerate | .77 |
| 19. Systematic | .76 |
| 20. Good organizer | .74 |
| 21. Sense of humor | .73 |
| 22. Ambitious | .72 |
| 23. Friendly | .72 |
| 24. Cheerful | .72 |
| 25. Industrious | .72 |
| 26. Kind | .68 |
| 27. Widely informed | .67 |
| 28. Interested in teaching | .67 |
| 29. Cultured | .67 |
| 30. Loyal to school | .65 |
| 31. Sociable | .65 |
| 32. Has poise | .64 |
| 33. Polite | .63 |
| 34. Many interests | .62 |
| 35. Courteous | .62 |
| 36. Has self-control | .61 |
| 37. Adaptable | .59 |
| 38. Good voice | .57 |
| 39. Good pronunciation | .57 |
| 40. Purposeful | .53 |
| 41. Healthy | .48 |
| 42. Neat in appearance and in dress | .46 |
| 43. Believes in education | .46 |
| 44. Refined | .40 |
| 45. Good grammar | .37 |
| 46. Strict | .32 |

Summary Number 10 (47)

a. Reference:
Haggard, William W. "Some Freshmen Describe the Desirable College Teacher." *School and Society*, 58:238–40, September, 1943.
b. Criterion:
Concensus of opinion.
c. Number of persons studied:
49 college freshmen.
d. Aspects of teachers or teaching studied:
See below.
e. Data-gathering devices:
Questionnaire asking for list of qualities most desired in college teachers.
f. Results:

Freshmen of Western Washington College of Education Ranking of Qualities

1. Ability or skill in teaching and organizing subject matter.
2. Ability to get along with students.
3. Fairness or impartiality.
4. Personality to put course across.
5. Knowledge of subject matter.
6. Sense of humor.
7. Sincerity and honesty.
8. Appearance.

Seniors of New Jersey State Teachers College Ranking of Qualities

1. Knowledge of subject matter.
2. Personality to put course across.
3. Fairness or impartiality.
4. Ability or skill in teaching and organizing subject matter.
5. Ability to get along with students.
6. Sincerity and honesty.
7. Sense of humor.
8. Appearance.

Summary Number 11 (49)

a. Reference:
Hart, Frank W. *Teachers and Teaching*. New York: The Macmillan Co., 1934.
b. Criterion:
Subjective pupil rating.
c. Number of persons studied:
Some 10,000 seniors in 66 high schools in widely distributed sections of the U. S.
d. Aspects of teachers or teaching studied:
Reasons for liking "Teacher A" best. Reasons for liking "Teacher Z" least. Ways best teacher differed from either A or Z.
e. Data-gathering devices:
Survey blank, subjective in nature, prepared for this study.

Reasons for Liking "Teacher A" Best, Arranged in Order of Frequency of Mention, as Reported by 3725 High School Seniors

| Reasons for liking "Teacher A" best | Frequency of Mention | Rank |
|---|---|---|
| Is helpful with school work, explains lessons and assignments clearly and thoroughly, and uses examples in teaching | 1950 | 1 |
| Cheerful, happy, good-natured, jolly, has a sense of humor, and can take a joke | 1429 | 2 |
| Human, friendly, companionable, "one of us" | 1024 | 3 |
| Interested in and understands pupils | 937 | 4 |
| Makes work interesting, creates a desire to work, makes class work a pleasure | 805 | 5 |
| Strict, has control of the class, commands respect | 763 | 6 |
| Impartial, shows no favoritism, has no "pets" | 695 | 7 |
| Not cross, crabby, grouchy, nagging, fair in giving examinations and tests | 613 | 8 |
| "We learned the subject" | 638 | 9 |
| A pleasing personality | 504 | 10 |

TABLE VI—Continued

f. Results:

Reasons for Liking "Teacher Z" Least, Arranged in Order of Frequency of Mention, as Reported by 3725 High School Seniors

| Reasons for liking "Teacher Z" least | Frequency of Mention | Rank |
|---|---|---|
| Too cross, crabby, grouchy, never smiles, nagging, sarcastic, loses temper, "flies off the handle" | 1708 | 1 |
| Not helpful with school work, does not explain lessons and assignments, not clear, work not planned | 1025 | 2 |
| Partial, has "pets" or favored students, and "picks on certain pupils" | 859 | 3 |
| Superior, aloof, haughty, "snooty", overbearing, does not know you out of class | 775 | 4 |
| Mean, unreasonable, "hard boiled," intolerant, ill-mannered, too strict, makes life miserable | 652 | 5 |
| Unfair in marking and grading, unfair in tests and examinations | 614 | 6 |
| Inconsiderate of pupils' feelings, bawls out pupils in the presence of classmates, pupils are afraid and ill at ease and dread class | 551 | 7 |
| Not interested in pupils and does not understand them | 442 | 8 |
| Unreasonable assignments and homework | 350 | 9 |
| Too loose in discipline, no control of class, does not command respect | 313 | 10 |

Differences Between "Teacher H" and "Teacher A," Arranged in Order of Frequency, as Reported by 763 High School Seniors

| "Teacher H" differed from "Teacher A" as follows: | Frequency of Mention | Rank |
|---|---|---|
| More exacting in standards of work, stricter in marking, "we learned more" | 267 | 1 |
| Better at explaining lessons and assignments, work is better planned | 155 | 2 |
| Knows the subject better and can "put it over" better | 95 | 3 |
| Stricter, more rigid discipline | 85 | 4 |
| Makes the work more interesting | 46 | 5 |
| Is less friendly | 39 | 6 |
| More serious, more businesslike, keeps closer to the subject, more conscientious | 38 | 7 |
| Less understanding of pupils, less interested in pupils | 13 | 8 |
| More sarcastic | 12 | 9 |
| Less attractive | 10 | 10 |

Summary Number 12 (60)

a. Reference:
Jersild, Arthur T. "Characteristics of Teachers Who Are 'Liked Best' and 'Disliked' Most." *Journal of Experimental Education*, 9:139–51, December, 1940.

b. Criterion:
Written ratings by graduate students; elementary and high school pupils.

c. Number of persons studied:
Graduate students: 117 women, 20 men; pupils: grades 1 to 12; 526 described teachers liked; 373 described teachers disliked.

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
(a) Reports written by adults, who were asked to look back on elementary years.
(b) Written and oral reports submitted by elementary and high school pupils.

f. Results:

General Summary, in Terms of Six Large Categories, of Relative Frequency of Mention of Various Characteristics in Descriptions by Pupils of Teachers Who They "Liked Best" and "Liked Least or Disliked Most" and in Similar Descriptions by Adults on the Basis of Recollections of Their Elementary School Teachers

| | Teachers liked best | | | | Teachers disliked most | | | |
|---|---|---|---|---|---|---|---|---|
| Age level of persons reporting | 5–8 | 9–12 | 13–17 | Over 20 | 5–8 | 9–12 | 13–17 | Over 20 |
| Grade level of persons reporting | 1–3 | 4–6 | 7–12 | Post-grad. | 1–3 | 4–6 | 7–12 | Post-grad. |
| Number of persons reporting | 25 | 303 | 298 | 137 | 9 | 99 | 265 | 137 |
| Total number of items mentioned | 49 | 370 | 604 | 443 | 15 | 170 | 459 | 414 |
| I. Human qualities as a person | 18 | 22 | 28 | 43 | 20 | 21 | 32 | 43 |
| II. Physical appearance, grooming, etc. | 0 | 7 | 5 | 18 | 7 | 8 | 7 | 18 |
| III. Qualities and performance as a disciplinarian | 23 | 24 | 26 | 19 | 47 | 43 | 35 | 31 |
| IV. Participation in pupils' activities, games, non-academic interests | 20.5 | 6 | 3 | 2 | 7 | 7 | 1 | .2 |
| V. Performance as a teacher, teaching | 20.5 | 27 | 32 | 12 | 7 | 17 | 18 | 13 |
| VI. Miscellaneous | 18 | 14 | 6 | 7 | 13 | 10 | 7 | .7 |

Summary Number 13 (67)

a. Reference:
Lamson, Edna F. "Some College Students Describe the Desirable College Teacher." *School and Society*, 56:615, December, 1942.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
266 college students.

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
Students were asked to list qualities. Results tabulated and the eight which ranked the highest were mimeographed and returned to the seniors. From these eight he chose the six he valued most highly and assigned to each a rank value.

f. Results:

TABLE VI—Continued

Summary of Qualities Listed in Order of Importance

| Rank assigned to item | 1 Knowledge of subject matter | 2 Personality to put course across | 3 Fairness or impartiality | 4 Ability or skill in teaching and organizing subject matter | 5 Ability to get along with students | 6 Sincerity and honesty | 7 Sense of humor | 8 Appearance | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 29 | 9 | 16 | 5 | 1 | 7 | 0 | 0 | 67 |
| 2 | 13 | 6 | 7 | 20 | 6 | 4 | 0 | 0 | 56 |
| 3 | 1 | 12 | 8 | 7 | 2 | 4 | 1 | 2 | 37 |
| 4 | 3 | 7 | 10 | 5 | 7 | 3 | 2 | 4 | 41 |
| 5 | 1 | 5 | 3 | 2 | 9 | 4 | 8 | 5 | 37 |
| 6 | 2 | 7 | 1 | 1 | 8 | 1 | 6 | 2 | 28 |
| Number of cases | 49 | 46 | 45 | 40 | 33 | 23 | 17 | 13 | 266 |
| Percentage | 18.4 | 17.3 | 16.9 | 15.0 | 12.4 | 8.6 | 6.4 | 4.9 | 99 |
| Standard error | 2.37 | 2.3 | 2.3 | 2.19 | 2.02 | 1.72 | 1.5 | 1.32 | |
| Percentage standard error | 7.76 | 7.23 | 7.34 | 6.84 | 6.03 | 5.00 | 4.26 | 3.71 | |

Summary Number 14 (81)

a. Reference:
Mead, A. R. "Qualities of Merit in Good and Poor Teachers." *Journal of Educational Research*, 20:239–59, 1929.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
130 teachers.

d. Aspects of teachers or teaching studied:
Techniques, scholarship, professional interest, community relations, personal qualities.

e. Data-gathering devices:
Checklist and interview.

f. Results:

The Combined Group Reaction of Forty Specialists in the Field of Teacher Training in Various College and Universities Throughout the United States and Forty County Superintendents of the State of South Dakota to the Relative Importance of One Hundred Thirty Five Success Factors Common in the Training of Teachers for the One-Room Rural School

| Fourth Quartile Items | Index of estimated importance |
|---|---|
| Characteristics of goods or bad assignments | 289 |
| How to teach correct methods of study | 288 |
| Adapting instruction to individual differences | 288 |
| Teacher's preparation for the assignment | 285 |
| Keeping small groups busy while one is reciting | 285 |
| The aim and importance of the assignment | 283 |
| Motivating children for their work | 283 |
| How to adjust programs for several grades | 281 |

Qualities Appearing in 50% or More of the Group of Teachers

| | Elem. | H. S. | Misc. | Misc. I Miscellaneous Interviewed Teachers | Poor Teachers |
|---|---|---|---|---|---|
| Strong Qualities of Technique | 33 | 27 | 41 | 45 | 4 |
| Qualities of Scholarship | 16 | 10 | 22 | 23 | 2 |
| Factors Producing Professional Improvement | 9 | 5 | 23 | 25 | 3 |
| Relations of Teacher to Community | 10 | 10 | 14 | 11 | 5 |
| Personal Qualities of Teachers | 63 | 62 | 62 | 64 | 18 |
| Total Number of Teachers | 40 | 30 | 30 | 9 | 21 |

Summary Number 15 (124)

a. Reference:
Tostlebe, Milton F. "Analysis of the Relative Importance of the Success Factors Common in the Training of Teachers for the One-Room School." *Journal of Educational Research*, 30:397–402, February, 1937.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
66 specialists; 64 county superintendents.

d. Aspects of teachers or teaching studied:
Techniques of teaching.

e. Data-gathering devices:
Questionnaire.

f. Results:
Those answering questionnaire were to rate the techniques as:

| | Weight |
|---|---|
| Very important | 3 |
| Average importance | 2 |
| Little importance | 1 |
| No importance | 0 |

The items were totaled for frequency, multiplied by their appropriate weights and index numbers assigned.

| | |
|---|---|
| General attitude of teacher toward the community | 281 |
| Interest (of pupils) | 280 |
| Types of questions (good or bad) | 280 |
| Attention | 275 |
| Professional standards and ideals (e.g., underbidding) | 275 |
| Lesson planning and its relation to teaching efficiency | 274 |
| How to organize unit methods of instruction | 274 |
| Relation of teacher with patrons and parents | 274 |
| Problem solving | 274 |
| Organization of daily routine | 271 |
| Problems and difficulties of study period | 271 |
| Development of good sportsmanship attitude | 271 |
| The proper use of reference material | 270 |
| Teaching marks more objective | 269 |
| Teacher's remarks and comments in the community | 266 |
| Developing cooperative spirit | 266 |
| Physical conditions of the room | 266 |
| Mastery of fundamentals as an objective of education | 264 |
| Practice in assignment making | 264 |
| Proper teacher–pupil relationships | 264 |
| Teacher's general appearance | 264 |
| Efforts (of pupils) | 264 |
| Practice in conducting a socialized recitation | 264 |
| Teacher's place on the playground | 264 |
| Teacher's health and care | 264 |

Summary Number 16 (133a)

a. Reference:
Paul A. Witty, "Evaluation of Studies of the Characteristics of the Effective Teacher." In the 1948 Official Report of the American Educational Research Association on *Improving Educational*

TABLE VI—Continued

*Research*. American Educational Research Association, Washington, D. C., 1948, pp. 198–204.

b. Criterion:
Opinions of pupil, grades I to XII, on the teacher who has helped them most.

c. Number of persons studied:
14,000 letters in first contest; 33,000 letters in second contest.

d. Aspects of teachers or teaching studied:
Characteristics of the teacher who had helped pupils most.

e. Data-gathering devices:
Letters written by pupils.

f. Results:
Most frequently mentioned positive traits:

1. Cooperative, democratic attitude.
2. Kindliness and consideration for the individual.
3. Patience.
4. Widen interests.
5. Personal appearance and pleasing manner.
6. Fairness and impartiality.
7. Sense of humor.
8. Good disposition and consistent behavior.
9. Interest in pupils' problems.
10. Flexibility.
11. Use of recognition and praise.
12. Unusual proficiency in teaching.

Most frequently mentioned negative traits:

1. Bad tempered and intolerant.
2. Unfair and inclined to have favorites.
3. Disinclined to help pupils.
4. Unreasonable in demands.
5. Tendency to be gloomy and unfriendly.
6. Sarcastic, and inclined to use ridicule.
7. Unattractive appearance.
8. Impatient and inflexible.
9. Tendency to talk excessively.
10. Inclined to talk down to pupils.
11. Overbearing and conceited.
12. Lacking sense of humor.

Summary Number 17 (134)

a. Reference:
Woellner, Robert C. "Evaluation of Apprentice Teachers." *School Review*, 49:267–71, April, 1941.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
102 schedules for rating apprentice teachers.

d. Aspects of teachers or teaching studied:
See below.

e. Data-gathering devices:
Various types of rating scales employed in evaluating apprentice teachers.

f. Results:

Ten Most Frequently Found Traits

| Trait | Frequency |
|---|---|
| 1. Scholarship | 79 |
| 2. Appearance | 75 |
| 3. Use of English | 71 |
| 4. Cooperation | 70 |
| 5. Voice | 65 |
| 6. Lesson preparation | 61 |
| 7. Provision for individual differences | 58 |
| 8. Professional attitude | 54 |
| 9. Discipline | 52 |
| 10. Questioning skill | 51 |

*VI. A miscellaneous collection of studies of teachers and teaching efficiency*

Summary Number 1 (4)

a. Reference:
Anderson, H. H. and Brewer, H. M. "Studies of Teachers' Classroom Personalities, I. Dominative and Socially Integrative Behavior of Kindergarten Teachers." *Applied Psychology Monograph*, 6:157, 1945.

b. Criterion:
Study of children's behavior by observation.

c. Number of persons studied:
2 teachers; 32 kindergarten children.

d. Aspects of teachers or teaching studied:
Child behavior, teachers' dominative and integrative contacts.

e. Data-gathering devices:
Observation blank, Form II, Dept. of Psychology, University of Illinois.

f. Results:

Coefficients of Intercorrelation of Selected Teacher Contacts

| Teacher Contacts | Domination initiated by child | Total integration | Integration initiated by teacher | Integration initiated by child |
|---|---|---|---|---|
| Total Domination | --- | .24 | .16 | .23 |
| Domination initiated by teacher | .57 | --- | .21 | --- |
| Domination initiated by child | --- | --- | --- | .53 |
| Integration initiated by teacher | --- | --- | --- | .39 |

Coefficients of Correlation Between Teacher Contacts and Child Behavior Measures

| Child Behavior | Total individual contacts | Total domination | Domination initiated by teacher | Domination initiated by child | Integration Total | Integration initiated by teacher | Integration initiated by child |
|---|---|---|---|---|---|---|---|
| 1. Works alone | —.50 | —.49 | —.46 | —.41 | —.36 | —.22 | —.36 |
| 2. Plays harmoniously | .37 | .34 | .28 | .44 | .34 | .13 | .39 |
| 3. Plays dominatively | .29 | .32 | .29 | .34 | .4 | —.15 | .32 |
| 4. Plays noisily, dangerously, destructively | .45 | .36 | .58 | .33 | —.02 | .11 | .05 |
| 5. Follows teachers lead | —.22 | —.40 | .37 | —.34 | .06 | .22 | —.08 |
| 6. Does not follow teachers lead | .36 | .55 | .55 | .24 | —.02 | —.08 | —.02 |
| 7. Watching | —.03 | —.09 | —.06 | —.21 | —.07 | —.19 | —.24 |

TABLE VI—Continued

Summary Number 2 (5)

a. Reference:
Anderson, H. H. and Brewer, J. E. "Studies of Teachers' Classroom Personalities, II. Effects of Teachers' Dominative and Integrative Contacts on Children's Classroom Behavior." *Applied Psychology Monograph*, 8:128, 1946.

b. Criterion:
Teachers judgments.

c. Number of persons studied:
129 second and third grade children and 4 teachers.

d. Aspects of teachers or teaching studied:
Teacher-pupil behavior relative to dominance and integration.

e. Data-gathering devices:
Four observers, two of which had previously established their reliability as observers and had used the same observation blank in recording data for two other studies. The other two were untrained graduate students used in a further project of studying difficulties in training reliable observers.
Specially keyed observation blank constructed by the author for the study.

f. Results:
In the fall sampling of data it was found that teacher D was generally more active than teacher C, that this greater activity was shown with one exception in higher frequencies of all types of group contacts, that teacher D had higher frequencies of all types of dominative contacts with individual children, but that the mean frequencies of individual integrative contacts by the two teachers were practically identical. In the fall teacher D had over twice as many individual *domination with conflict* contacts per child as did teacher C and over four times as many such contacts with groups of children. In the interpretation of the teacher contacts according to the mental hygiene assumptions, teacher C was accorded an advantage over teacher D, evidence was presented to show, however, that neither teacher made a consistent mental hygiene contribution to her children. The only reliable difference in the behavior of the children in the two rooms in the fall were shown in two categories of response in recitation.
Coefficients of correlation showed that in both fall and winter samplings teacher C, was, through her individual contacts "cutting the vicious circle" of domination; while in both fall and winter samplings teacher D was not. Neither showed any evidence of reducing conflict in group contacts.

Summary Number 3 (14)

a. Reference:
Blum, L. P. "A Comparative Study of Students Preparing for Five Selected Professions Including Teaching." *Journal of Experimental Education*, 16:31–65, September, 1947.

b. Criterion:
College in which enrolled.

c. Number of persons studied:
University of Wisconsin male students; 25 from each of the Schools of Law, Education, Journalism, Medicine, and Engineering.

d. Aspects of teachers or teaching studied:
Personal and environmental factors, personality traits, interests.

e. Data-gathering devices:
Questionnaire developed by author, Minnesota Multiphasic Personality Inventory, Strong Vocational Interest Blank for Men.

f. Results:
While a number of group differences were observed, students enrolled in professional education courses were not greatly different from those enrolled in other professional groups.

Summary Number 4 (17)

a. Reference:
Bolton, Floyd B. "Evaluating Teaching Effectiveness Through the Use of Scores on Achievement Tests." *Journal of Educational Research*, 38: 691–6, May, 1945.

b. Criterion:
Pupil achievement on Iowa Every-Pupil Test in U. S. History.

c. Number of persons studied:
Four-hundred sixty-one pupils and seven teachers.

d. Aspects of teachers or teaching studied:
Teaching effectiveness.

e. Data-gathering devices:
1942 Iowa Every-Pupil Test in U. S. History.

f. Results:

Comparison of Indices of Teaching Effectiveness with Pupils' Raw Scores on the Iowa Test

| Teacher | Index of effectiveness* | Median Raw Iowa Scores |
|---|---|---|
| A | .68 | 26.8 |
| B | —.24 | 27.1 |
| C | .33 | 30.1 |
| D | .00 | 26.2 |
| E | .50 | 27.8 |
| F | 3.01 | 29.3 |

*Average pupil achievement for paired pupils.

Summary Number 5 (24)

a. Reference:
Buellesfield, Henry. "Causes of Failure Among Teachers." *Educational Administration and Supervision*, 1:439–45, September, 1915.

b. Criterion:
Dismissal of teacher during or at the end of the school term.

c. Number of persons studied:
116 school systems employing 4848 teachers.

d. Aspects of teachers or teaching studied:
Causes of failure.

e. Data-gathering devices:
Questionnaire.

TABLE VI—Continued

f. Results:

Causes of Failure

| | Chief Cause | Contributory Cause |
|---|---|---|
| Weakness in discipline | 114 | 54 |
| Lacked judgment | 45 | 86 |
| Deficient in scholarship | 42 | 40 |
| Poor methods | 41 | 79 |
| Daily preparation insufficient | 23 | 51 |
| Lacked industry | 19 | 28 |
| Lacked sympathy | 17 | 45 |
| Too nervous | 15 | 30 |
| Deficient in social qualities | 15 | 27 |
| Unprofessional attitudes | 14 | 28 |
| Unattractive appearance | 12 | 29 |
| Poor health | 12 | 13 |
| Lacked culture and refinement | 11 | 28 |
| Uninterested in work of teaching | 10 | 26 |
| Too many outside interests | 10 | 23 |
| Immoral | 10 | 1 |
| Too frivolous | 9 | 17 |
| Disloyalty | 9 | 16 |
| Could not control temper | 7 | 23 |
| Deceitful | 7 | 19 |
| Untidy in dress | 7 | 14 |
| Remained too long | 5 | 17 |
| Too immature | 3 | 13 |
| Wrong religious views | 2 | 3 |
| Attended places of questionable amusement | 1 | 8 |
| Keeping company with high school boys | 1 | 0 |
| Use of tobacco | 0 | 1 |

Summary Number 6 (25)

a. Reference:
Bush, Robert Nelson. "A Study of Student-Teacher Relationships." *Journal of Educational Research*, 35:645–56, May, 1942.

b. Criterion:
Observed relationships between teachers and pupils.

c. Number of persons studied:
250 students in a small private school for boys, grades 9–14.

d. Aspects of teachers or teaching studied:
Social beliefs of teachers vs. social beliefs of students, teachers fairness, personal liking of student for teacher, personal liking of teacher for student, teacher sympathy, teachers opinion of the students' quality of thinking, teachers knowledge of subject, students opinion of teachers knowledge of subject, students knowledge of subject, teachers general teaching ability.

e. Data-gathering devices:
Information gathered through tests, rating scales, anecdotal records, interviews, questionnaires, and school records.

f. Results:
The maximum student-teacher relationship involves the following:

1. The teacher is, in the opinion of his supervisors and administrators, well adjusted to his job.
2. The teacher has, in the opinion of his supervisors and administrators, keen insight into and objective attitude toward students and students' problems.
3. The teacher considers counseling important, spends much time in counseling with students, uses guidance files frequently, and knows each student in his class as a person—being acquainted with his background, his interest, abilities, aptitudes and future plans.
4. The student considers that the teacher is fair and sympathetic not only in his dealings with him but with other students as well.
5. The student feels that the class is valuable and that the teacher has a good grasp of the subject and can explain things clearly and assist him in planning and organizing his work.
6. The student likes the teacher personally.
7. The student receives good grades, has superior achievement in social science, and has a high I. Q.
8. The student and teacher tend to have similar purposes, social beliefs and interests.
9. The student likes the student personally.
10. The teacher has the opinion that the student is well-adjusted academically.
11. The teacher believes that he has an effective relationship with the student.

Summary Number 7 (28)

a. Reference:
Connor, W. L. "New Method of Rating Teachers." *Journal of Educational Research*, 1:338–58, May, 1920.

b. Criterion:
None.

c. Number of persons studied:
125 teachers.

d. Aspects of teachers or teaching studied:
Deportment, self-control, emotional reaction, morale, initiative, knowledge and skill, thinking.

e. Data-gathering devices:
The Connor Rating Scale.

f. Results:
Rating descriptions worked out cooperatively by teachers and validated by 132 outside teachers, principals, and supervisors.

Rating description then used by superintendent for judging teaching performance.

Ratings given by superintendent distributed as follows:

| | 1916–17 | 1917–18 | 1918–19 |
|---|---|---|---|
| A | 0 | 0 | 4 |
| B | 10 | 16 | 25 |
| C | 21 | 17 | 10 |
| D | 9 | 6 | 2 |
| E | 2 | 3 | 0 |

Summary Number 8 (35)

a. Reference:
Di Michael, Salvatore G. "Comparative Changes in Teachers Attitudes Resulting from Courses in Mental Hygiene and Educational Guidance." *Journal of Educational Research*, 37:656–69, May, 1944.

b. Criterion:
Changes on Wickman Behavior Rating Scale.

c. Number of persons studied:
46 teachers with experience attending summer school classes.

d. Aspects of teachers or teaching studied:
Changes in teacher attitudes toward behavior cases.

e. Data-gathering devices:
Wickman Behavior Rating Scale, Schedule B.

TABLE VI—Continued

f. Results:
Correlations between average seriousness ratings on fifty classroom behavior problems by educational guidance class, mental hygiene class, and the 1927 mental hygienists, 1940 teachers, and 1940 mental hygienists, of Wickman's studies:

| Groups | r |
|---|---|
| Guidance Class, Initial vs. Final | .94 |
| Mental Hygiene Class, Initial vs. Final | .83 |
| Initial Guidance Class vs. Initial Mental Hygiene Class | .83 |
| Initial Guidance Class vs. Final Mental Hygiene Class | .61 |
| Final Guidance Class vs. Initial Mental Hygiene Class | .89 |
| Final Guidance Class vs. Final Mental Hygiene Class | .67 |
| '27 Mental Hygienists vs. Initial Mental Class | .49 |
| 1927 Mental Hygienists vs. Final Mental Hygienists Class | .72 |
| 1927 Mental Hygienists vs. Initial Guidance Class | .29 |
| 1927 Mental Hygienists vs. Final Guidance Class | .28 |
| 1940 Teachers vs. Initial Guidance Class | .85 |
| 1940 Teachers vs. Final Guidance Class | .88 |
| 1940 Teachers vs. Initial Mental Hygienists Class | .85 |
| 1940 Teachers vs. Final Mental Hygienists Class | .67 |
| 1940 Mental Hygienists vs. Initial Guidance Class | .55 |
| 1940 Mental Hygienists vs. Final Guidance Class | .56 |
| 1940 Mental Hygienists vs. Initial Mental Hygienists Class | .70 |
| 1940 Mental Hygienists vs. Final Mental Hygienists Class | .78 |

Summary Number 9 (42)

a. Reference:
Garrison, K. C. "Comparative Responses to Teachers and Student Teachers to Various Items on the Teaching Situations Test." *Elementary School Journal*, 45:334–39, February, 1945.

b. Criterion:
Comparative responses of teachers and student teachers to various items on a Teaching Situations Test.

c. Number of persons studied:
46 women, college seniors, just completed 8 weeks of practice teaching; 42 women, elementary school teachers of the same locality.

d. Aspects of teachers or teaching studied:
Amount of satisfaction and dissatisfaction of teachers and student teachers to various aspects of the teaching situation.

e. Data-gathering devices:
Teaching Situations Test by Howard Y. McClusky.

f. Results:

Items in the Teaching Situation Ranked Highest by Elementary Teachers and the Scores Assigned to the Same Items by Student Teachers

| | Mean scores | | |
|---|---|---|---|
| | Teachers | Students | Difference |
| 1. To be able to stimulate a child who has been doing poor work to do better | 2.84 | 2.80 | .04 |
| 2. To have existing between teacher and pupils a feeling that she is helping | 2.80 | 2.80 | ---- |
| 3. To guide the pupil so that he wills to do the right things | 2.73 | 2.71 | .02 |
| 4. To see pupils make progress | 2.72 | 2.53 | .19 |
| 5. To be able to create for children enthusiasm and interest for school work | 2.70 | 2.75 | —.05 |
| 6. To make use of excursions to supplement classroom instruction | 2.06 | 2.31 | —.25 |
| 7. To do work which the supervisor approves | 2.06 | 1.82 | .24 |
| 8. To know definitely at least a year in advance what your position will be | 2.03 | 1.33 | .70 |
| 9. To know of progress of former pupils | 1.91 | 1.76 | .15 |

Items of the Teaching Situations Test Ranked Lowest by Elementary School Teachers and the Scores Assigned to the Same Items by Student Teachers

| | Mean Scores | | |
|---|---|---|---|
| | Teachers | Students | Difference |
| 1. To have children who are untruthful | —2.79 | —1.98 | —0.81* |
| 2. Failure of teacher cooperation causing lack of harmony in staff | —2.57 | —2.28 | —0.29 |
| 3. To have obscene notes written by children to each other | —2.55 | —2.18 | —0.37 |
| 4. To be compelled to teach for an insufficient salary | —2.53 | —2.55 | 0.02 |
| 5. To have one child who keeps the class disrupted and entertained | —2.50 | —1.59 | —0.91 |
| 21. To have mothers interfere with the work of the school | —2.03 | —1.82 | —0.21 |
| 22. To have a child who swears | —2.03 | —1.58 | —0.45 |
| 23. Having social restrictions on the teachers conduct | —2.00 | —2.33 | 0.33 |
| 24. To have a stubborn pupil | —2.00 | —1.45 | —0.55 |
| 25. To have complaints and criticism made by those outside teaching force | —1.97 | —2.03 | .06 |

*Minus signs indicate items on which teachers show greater dissatisfaction than do student teachers.

Items of the Teaching Situations Test on Which the Teachers and Student Teachers Varied Most in Their Responses

| | Mean Scores | | |
|---|---|---|---|
| | Teachers | Students | Difference |
| 1. Parents of slow children who continually want to help on home work | —0.75 | 0.97 | —1.72* |
| 2. A troublesome child who leaves school | 0.85 | —0.85 | 1.43 |
| 3. To be expected to follow a principal's or supervisor's directions for conducting your room | —0.79 | —2.15 | 1.36 |
| 4. To have parents continually inquire concerning child's progress | —0.27 | 1.03 | —1.30 |
| 11. Interruptions of the class while teaching | —1.61 | —0.73 | —0.88 |
| 12. To find desirable associates in the community | 1.65 | 2.50 | —0.85 |
| 13. To have much association with children and little with adults | —1.31 | —2.14 | 0.83 |
| 14. To have to follow a course of study | 0.56 | —0.26 | 0.82 |

*Minus signs indicate items on which teachers show less satisfaction than do student teachers.

TABLE VI—Continued

Summary Number 10 (45)

a. Reference:
Greene, James E. and Staton, T. F. "Predictive Value of Various Tests of Emotionality and Adjustment in a Guidance Program for Prospective Teachers." *Journal of Educational Research*, 32:653–59, May, 1939.

b. Criterion:
Emotionality and adjustment; teaching aptitude; scholarship marks; intelligence; socio-economic status.

c. Number of persons studied:
100 students, College of Education.

d. Aspects of teachers or teaching studied:
Validity of measures of social adjustment; does teaching aptitude take into consideration personality and adjustment; relation of personality and adjustment to marks, intelligence, study habits, social-economic status.

e. Data-gathering devices:
Bernreuter Personality Inventory; Bell Adjustment Inventory; Willoughby Emotional Maturity Scale; George Washington University Teaching Aptitude Test; Coxe–Orleans Prognosis Test of Teaching Ability; Morris Trait Index L; Ohio State Psychological Examination; Wrenns Study Habits Inventory; Sims Score Card for Socio-Economic Status.

f. Results:

Intercorrelations Among Several Sub-Tests of Emotionality and Adjustment

| | |
|---|---|
| Introversion and Neuroticism | .88 |
| Self-Confidence and Neuroticism | —.85 |
| Total Adjustment and Emotional Adjustment | .83 |
| Dominance and Self-Confidence | .79 |
| Neuroticism and Dominance | —.78 |
| Self-Confidence and Introversion | —.72 |
| Neuroticism and Emotional Adjustment | —.69 |

Relation of Teaching Aptitude to Emotionality and Adjustment (Average Correlations)

| | |
|---|---|
| George Washington University Teaching Aptitude | .00 |
| Coxe–Orleans Prognosis Test | .10 |
| Morris Trait Index L | .12 |

Relationship of Personality and Adjustment Scores to: Average of 12 Correlations

| (Average of 12 correlations) | |
|---|---|
| a) Scholastic Marks | .03 |
| b) Intelligence | .02 |
| c) Study Habits | .17 |
| d) Socio–Economic Status | .05 |

Intercorrelations Among the Several Supplementary Measures

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Coxe–Orleans | | | | | | | |
| 2. Geo. Washington U. | .60 | | | | | | |
| 3. Morris Trait Index L | .52 | .37 | | | | | |
| 4. School Marks | .66 | .40 | .46 | | | | |
| 5. Intelligence | .69 | .47 | .38 | .65 | | | |
| 6. Study Habits | .32 | .10 | .20 | .40 | .21 | | |
| 7. Socio–Economic Status | —.08 | .06 | .06 | —.01 | .01 | —.16 | |
| 8. Average Correlation | .45 | .33 | .33 | .43 | .40 | .18 | .01 |

Summary Number 11 (48)

a. Reference:
Harrington, Welles. "Recommendations Quality and Placement Success: A Study of the Relation Between an Estimate of the Quality of Written Recommendations and Success in Securing Certain Types of Teaching Positions." *Psychology Monograph*, 55:1–62, 1943.

b. Criterion:
Teachers successful in obtaining a certain position.

c. Number of persons studied:
58 teaching positions; 183 candidates; 1035 recommendations.

d. Aspects of teachers or teaching studied:
Not listed.

e. Data-gathering devices:
Letters of recommendations.

f. Results:
Significant F's reported between means recommendation scores for successful and unsuccessful candidates.

Conclusions

1. Reliable association between superior recommendations and success in placement.
2. Recommendations of superior quality are effective in securing a position, therefore recommendations are of value.
3. Employers select better people (as measured by the recommendations).
4. Recommendations discriminate reliably between candidates.

Summary Number 11a (49a)

a. Reference:
Hartmann, George W. "Measuring Teaching Efficiency Among College Instructors." *Archives of Psychology*, No. 154. American Psychological Association, Washington, D. C. (July, 1933), 45 pp.

b. Criterion:
Pupil change in items included in measuring instrument (see list below).

c. Number of persons studied:
Matched pair for three instructors varying in numbers from 27 to 28; also 10 students working with 5 instructors.

TABLE VI—Continued

d. Aspects of teachers or teaching studied:
Ability to produce desirable pupil changes.

e. Data-gathering devices:
The Allport–Vernon Scale of Values Test.
The Strong Vocational Interest Blank.
The Bernreuter Personality Inventory.
The Watson Test of Public Opinion.
An Achievement Test in Educational Psychology.
De Camp Intelligence Test.

f. Results:
Raw or Gross Inferiorities of Different Instructors in the Ability to Produce Certain Desirable Changes in Students of the Same Level of Attainment at the Beginning of a Course

| Teacher<br>Pupil scores paired in | A | B | C |
|---|---|---|---|
| (1) Allport–Vernon Theoretical Value | 0 | 2 | 1 |
| (2) Strong Interest Blank | 0 | 2 | 1 |
| (3) Bernreuter Personality Inventory | 0 | 2 | 1 |
| (4) Watson Fair-Mindedness Test | 1 | 0 | 2 |
| (5) Achievement in Educational Psychology | 2 | 1 | 0 |
| (6) DeCamp Intelligence Test | 0 | 1 | 2 |
| TOTAL | 3 | 8 | 7 |

Summary Number 12 (50)

a. Reference:
Hartmann, George W. "Social Attitudes and Information of American Elementary School Teachers." *Journal of Educational Sociology*, 11:506–10, April, 1938.

b. Criterion:
Liberal or conservative responses to attitude statements.

c. Number of persons studied:
10,000 elementary school teachers.

d. Aspects of teachers or teaching studied:
Social attitudes.

e. Data-gathering devices:
136 statements of attitudes given to elementary school teachers and a somewhat similar series given to high school teachers previously.

f. Results:
On the hypothesis that the progressive teacher is the "liberal" it was found that:

1. On both attitude and information tests the secondary teachers are more liberal.
2. The detailed graphic profiles for the two groups shows the elementary curve slightly but consistently below the secondary.
3. Where there were differences in favor of the elementary they seem to result from the fact that the elementary measure was given in 1937 while the secondary survey was made in 1936, during which interval certain issues, referred to in the test, were more publicized.

Summary Number 13 (51)

a. Reference:
Hartmann, George W. "Some Assumed Determiners of Teaching Attitudes." *Journal of Educational Research*, 31:357–62, January, 1938.

b. Criterion:
Comparative study; no outside criterion of teaching efficiency.

c. Number of persons studied:
Six different factors each using a different number of teachers. Factor I—233 teachers; Factor II—1687; Factor III—3514; Factor IV—2690; Factor V—322; Factor VI—304. Total: 8750 teachers.

d. Aspects of teachers or teaching studied:
Social attitudes.

e. Data-gathering devices:
For the description of the tests used see Chapter 8 of The Teacher and Society, the first yearbook of the John Dewey Society for the study of Education and Culture, edited by W. H. Kilpatrick and published by D. Appleton–Century, 1937.

f. Results:
This investigation contains evidence indicating that liberalism as an attitude in the field of human relations is the most readily found among men teachers, among married teachers, regardless of sex, and among instructors having few or no dependents.

Summary Number 14 (55)

a. Reference:
Hobson, Claude V. "How Much Do Teachers Know About Mental Hygiene?" *Mental Hygiene*, 21:231–42, June, 1937.

b. Criterion:
Opinion of experts.

c. Number of persons studied:
1600 teachers from rural schools, grade schools, high schools, supervisors of teachers in training in high schools and teachers colleges. Teacher training students in high schools, and student teachers in teachers colleges.

d. Aspects of teachers or teaching studied:
Teachers' knowledge of the principles of mental hygiene.

e. Data-gathering devices:
Author constructed a 57 item test composed of the principles rated highest by the judges.

f. Results:

Ten Principles Upon Which a High Percentage of Error Occurred

1. By indulging the withdrawal type of behavior, the teacher increases the underlying difficulties of adjustment, and the underlying expressions of social behavior are further entrenched. Percent of error—52.3
2. A child with conflicts of inferiority may develop traits opposite to his original characteristics, that is, he may become domineering, a bully, and a show off. Percent of error—41.6
3. A timid child is apt to substitute excessive reading and daydreaming for aggressive activity. Percent of error—40.3
4. The child's home life is the most important element in his mental health adjustment. Percent of error—37.6
5. Each success in life gives the child added confidence, while chronic defeat robs him of the feeling of self reliance. Percent of error—35.5
6. Children of low intelligence should have a different kind of education, not just less of the same kind that others get. Percent of error—31.6
7. Instead of facing realities, some individuals evade them in several ways, such as temper tantrums, sulkiness, neurotic pains, forgetfulness, sleep, hysteria, rationalization, and criticism of others. Percent of error—30.4

TABLE VI—Continued

8. Honesty and deceptive behavior are specific rather than general traits. A child may be honest in one situation and dishonest in another. Percent of error—30.0
9. The curriculum should be so selected, organized, and administered that children will be given worth while activities of interest to them, adapted to their abilities, and fitted to their needs. Percent of error—30.0
10. Many neurotic conditions result from a feeling of insecurity.

The mean score of 1024 teachers actually teaching in the public schools was 34.45 on a test of 45 items. Experienced teachers showed considerable superiority over inexperienced.

Teachers who had had courses in mental hygiene showed superiority over those who had never studied this subject. Although the difference was not extreme, the chances being 77 in 100 that the difference is reliable.

Teachers who had had more than four years of college training were much superior to those who had had one and a half years or less of training. Teachers trained in teachers colleges and universities ranked higher than those in other institutions. Rural teachers ranked low.

Teachers who are parents or who have had small children in their homes show no superiority over those who have not had this experience.

### Summary Number 15 (57)

a. Reference:
Hunt, Thelma. "Measuring Teaching Aptitude." *Educational Administration and Supervision*, 15: 334–42, May, 1929.

b. Criterion:
Grades in training courses; supervisors' ratings; abstract intelligence; and social intelligence.

c. Number of persons studied:
100 teachers college students.

d. Aspects of teachers or teaching studied:
Prediction of teaching success.

e. Data-gathering devices:
George Washington University Teaching Aptitude Test; George Washington University Mental Alertness Test; George Washington Social Intelligence Test; and course grades.

f. Results:
Reliability coefficient of the Teaching Aptitude Test (by the Spearman chance-half method on a group of 100 teachers college students)..... .91

Correlation between the "Teaching Aptitude Test" scores with grades in training courses:

| | |
|---|---|
| 1) First year students | .54 |
| 2) Second year students | .41 — .60 with average around .50 |
| 3) Advanced students | .33 — .62 with average around .50 |

Correlations between the "Teaching Aptitude Test" Scores and ratings by superiors in the school systems: .30 to .50.

Correlation of the "Teaching Aptitude Test" with:

| | |
|---|---|
| 1) George Washington University Mental Alertness Test | .57 |
| 2) George Washington University Social Intelligence Test | .60 |

### Summary Number 15a (68a)

a. Reference:
Lange, Phil C. "A Study of Concepts Developed by Students in an Undergraduate Course in the Psychology and Practice of Teaching." *Journal of Educational Research*, 36: pp. 641–61, May, 1943.

b. Criterion:
Concensus of opinion.

c. Number of persons studied:
One hundred sixty eight students and their instructors.

d. Aspects of teachers or teaching studied:
Forty-five concepts.

e. Data-gathering devices:
A vocabulary test.

f. Results:
The low relationships between scores on the vocabulary test and estimates of teaching efficiency would seem to indicate:
(1) That teacher marks in this course are influenced only slightly by the word meanings held by students, or
(2) That it was only a chance happening when students and their instructor used terms in the same senses.

### Summary Number 16 (69)

a. Reference:
Larson, Arthur H. and Marzoff, Stanley S. "Attitude of Teacher's College Students Towards Teaching." *Educational Administration and Supervision*, 29:434–38, October, 1943.

b. Criterion:
Attitude towards the teaching profession and factors related to differences in attitude.

c. Number of persons studied:
120 cases.

d. Aspects of teachers or teaching studied:
Relationship between attitudes and hours of credit, achievement, field of specialization, and intelligence.

e. Data-gathering devices:
Floyd Miller Scale on attitude towards the teaching profession; Teacher's College Personnel Association College Aptitude Test.

f. Results:

| Qualities | T score | Level of significance |
|---|---|---|
| Achievement | 1.3 | 20% |
| Intelligence | .46 | 65% |
| Area of Specialization | 1.04 | 5% |
| Miller Scale | Chi-Square 10, 67 | Significant at the 83% level of significance |

### Summary Number 17 (74)

a. Reference:
Littler, Sherman. "Why Teachers Fail." *Home and School Education*, 33:255–56, March, 1914.

b. Criterion:
Teachers *dropped* from faculty.

c. Number of persons studied:
213 replies involving reports on 676 teachers.

TABLE VI—Continued

d. Aspects of teachers or teaching studied:
Causes of failure.

e. Data-gathering devices:
Questionnaire.

f. Results:

Findings: Causes of Failure

| | No. cases | Per-cent |
|---|---|---|
| 1. Lack of discipline | 105 | 15.5 |
| 2. Lack of proper personality | 100 | 14.8 |
| 3. Lack of interest in work | 71 | 10.5 |
| 4. Lack of scholarship | 53 | 7.8 |
| 5. Lazy—made no daily preparation | 48 | 7.1 |
| 6. Lack of preparation | 29 | 4.3 |
| 7. Lack of instructional skill | 29 | 4.3 |
| 8. Lack of pedagogical training | 25 | 3.7 |
| 9. Failure to cooperate | 25 | 3.7 |
| 10. Not progressive—no professional spirit | 23 | 3.4 |
| 11. Lack of tact or common sense | 22 | 3.25 |
| 12. Lack of sympathy for childhood—disliked children | 22 | 3.25 |
| 13. Too young | 19 | 2.81 |
| 14. Failure in routine | 16 | 2.36 |
| 15. Immorality | 12 | 1.77 |
| 16. Ill health | 10 | 1.48 |
| 17. Soft pedagogy | 7 | 1.05 |
| 18. General incompetency | 7 | 1.05 |
| 19. No aim in the work | 3 | .43 |
| 20. Too old, grown stale, failed to get results | 2 | .29 |
| 21. Failure to get results | 1 | .14 |
| 22. False conception of educational success | 1 | .14 |
| 23. Clamoring after latest fads in textbooks | 1 | .14 |
| 24. Not entirely dependent upon herself for a living | 1 | .14 |
| 25. Attitude not a working one | 1 | .14 |
| 26. Combination of causes | 42 | 5.88 |

Summary Number 18 (76)

a. Reference:
Madsen, I. N. "The Prediction of Teaching Success." *Educational Administration and Supervision*, 13:39–47, January, 1927.

b. Criterion:
Superintendent's records.

c. Number of persons studied:
31 people who had been total failures as teachers.

d. Aspects of teachers or teaching studied:
Intelligence. Traits and qualities of students who failed as teachers.

e. Data-gathering devices:
Army Alpha Test.
Terman Group Test.
Questionnaire sent to superintendents.

f. Results:

Reasons Given by Superintendents Why 31 Teachers Failed

| Reasons for failure | Frequency |
|---|---|
| Personal appearance | 3 |
| Poor discipline | 12 |
| Inability to systematize work | 10 |
| Lack of instructional skill | 13 |
| Poor knowledge of subject-matter | 14 |
| Inability to cooperate | 8 |
| Indiscreet conduct | 8 |
| Lack of energy, enthusiasm | 6 |
| Lack of interest | 4 |
| Physical defect | 2 |

Summary Number 19 (78)

a. Reference:
Mason, Harry M. "Effects of Attitudes of High-School Teachers of Social Studies Upon the Attitudes of Their Pupils." *Further Studies in Attitudes*, Series V, Studies in Higher Education, No. 45. Lafayette, Indiana: Purdue University, June, 1942.

b. Criterion:
Groups of schqlars or experts qualified by their study and knowledge of social issues determine whether a statement is to be considered "liberal" or "conservative" in scoring.

c. Number of persons studied:
29 teachers and their pupils.

d. Aspects of teachers or teaching studied:
Liberalism and conservatism of teachers and its effects upon the attitudes of their pupils.

e. Data-gathering devices:
An adaptation of the Harper Social Study Scale.

f. Results:

| | Civic Belief Scores | | |
|---|---|---|---|
| | No. of teachers | Mean score | No. of of pupils |
| "Liberal" teachers | 9 | 64.56 | 194 |
| "Middle" teachers | 11 | 56.09 | 200 |
| "Conservative" teachers | 9 | 47.33 | 160 |

Summary Number 20 (79)

a. Reference:
Masters, Harry V. "Composite Faculty Judgment as a Predictive Factor in Guidance in Teacher Education." *Practical Values of Educational Research*. Official Report of the 1938 Meeting. Washington, D. C.: American Educational Association, Research Department, 1938, pp. 23–24.

b. Criterion:
Faculty judgments evidenced by the number of times a student was mentioned as undesirable from the point of view of teaching. A student had to be mentioned as undesirable in 25% of his classes.

c. Number of persons studied:
1005 students from which 143 were selected as undesirable.

d. Aspects of teachers or teaching studied:
Undesirable attitude toward life; emotional instability; inability to express oneself, particularly orally; nervous instability; lack of leadership; lack of amount of enthusiasm and vitality; disfigurement.

e. Data-gathering devices:
Records and ratings.

f. Results:
The "Mentioned" group was definitely inferior to the typical group in scholarship in spite of the request that scholarship be disregarded.

The "Mentioned" group was definitely inferior to the typical group in college aptitude rating.

The "Mentioned" group was definitely inferior to the typical group in teaching ability as measured by first practice teaching grade—47% received D or an F in the course.

A higher percent of the men than of the women were selected as undesirable.

There was some evidence that a smaller percent of those in the "Mentioned" group are graduated than of a typical entering group.

There was some inconclusive evidence that students in the "Mentioned" group secure teaching positions less frequently than typical graduates.

TABLE VI—Continued

There was some evidence that those of the "Mentioned" group who were finally graduated received inferior ratings from the field at the end of their first six months of teaching.

Summary Number 21 (87)

a. Reference:
Nemec, Lois Gadd. "Relationships Between Teacher Certification and Education in Wisconsin: A Study of Their Effects on Beginning Teachers." *Journal of Experimental Education*, 15:101–132, September, 1946.

b. Criterion:
Ability to instruct; ability to control; knowledge of subject matter; professional interest and growth; and cooperation.

c. Number of persons studied:
265 teachers who were denied a certificate after one year of teaching.

d. Aspects of teachers or teaching studied:
See Criteria.

e. Data-gathering devices:
Records of the 265 people of the investigation were taken from the file of 6,136 records in the active files of the Department of Public Instruction.

f. Results:

Candidates Classified According to Institution From Which Graduated and Compared on the Basis of Below Average Ratings on the Five Criteria

| Marked below average in: | Teachers Coll. Inc. Stout | Percent Rated Below Average: County Normals | University | Other Colleges | No. of Cases Rated Below Average |
|---|---|---|---|---|---|
| Ability to instruct | 66 | 65 | 68 | 60 | 176 |
| Ability to control | 71 | 78 | 93 | 70 | 195 |
| Knowledge of subject matter | 38 | 40 | 37 | 10 | 99 |
| Professional interest and growth | 57 | 58 | 75 | 60 | 154 |
| Cooperation | 51 | 37 | 43 | 30 | 129 |
| Total No. | 207 | 32 | 16 | 10 | 265 |
| Percent of cases | 78% | 12% | 6% | 4% | 100% |

Comparison of the Classifications of Candidates with Number and Percent of Below Average Ratings

| Below average in: | Percent Rated Below Average: Certificate Granted Elem. | H. S. | Certificate Denied Elem. | H. S. | Certificate Pending Elem. | H. S. |
|---|---|---|---|---|---|---|
| Ability to instruct | 78 | 51 | 78 | 73 | 61 | 61 |
| Ability to control | 67 | 79 | 78 | 100 | 57 | 76 |
| Knowledge of subject matter | 40 | 34 | 26 | 33 | 50 | 29 |
| Professional interest and growth | 59 | 54 | 60 | 66 | 50 | 57 |
| Cooperation | 55 | 50 | 39 | 60 | 32 | 38 |
| Total number of cases | 94 | 84 | 23 | 15 | 28 | 21 |

Summary Number 22 (88)

a. Reference:
Nutting, Edwin P. "Does Quantitative Training Produce Better Teaching?" *School Executive*, 62: 21, February, 1943.

b. Criterion:
Principals' and student ratings.

c. Number of persons studied:
More than 200 teachers; 185 high school seniors.

d. Aspects of teachers or teaching studied:
General teaching efficiency or skill compared with quantitative training.

e. Data-gathering devices:
Principals asked to rank staff in 1-2-3-4 order according to general teaching efficiency or skill; student requested to name on slip those teachers on high school staff he thought were the best teachers.

f. Results:
It was found that the M. A. degree holders received an average of 17.9 votes from the senior students, while the bachelor's degree holders received 17.03 votes. It is evident that the teaching done by the holders of the master's degrees, when judged by both students and principal, is not significantly superior to that of their less well-trained fellow staff members.

Summary Number 23 (91)

a. Reference:
Peck, Leigh A. "A Study of the Adjustment Difficulties of a Group of Women Teachers." *Journal of Educational Psychology*, 27:401–16, September, 1936.

b. Criterion:
Thurstone Personality Schedule.

c. Number of persons studied:
100 women teachers; control groups: 52 women students, 26 men.

d. Aspects of teachers or teaching studied:
Proportion of women teachers maladjusted; traits and habits affecting teachers' professional activities; problems which teachers are trying to adjust.

e. Data-gathering devices:
Thurstone Personality Schedule; Otis Self-Administering Test of Mental Ability; and personal data sheet.

f. Results:

Comparison of Responses to Thurstone Personality Schedule Between Men and Women

| | Men | Women | C.R. |
|---|---|---|---|
| 1. Moodiness | 05 | 34 | 5.05 |
| 2. Often in state of excitement | 00 | 23 | 6.74 |
| 3. Upset easily | 00 | 22 | 6.54 |
| 4. Ignorance of sex | 00 | 14 | 5.00 |

Correlations Between Intelligence as Measured by the Otis Test and Adjustment as Measured by the Thurstone Personality Schedule

| | |
|---|---|
| Women Teachers | .06 |
| Women Students | .03 |
| Men | .14 |

TABLE VI—Continued

Correlations Between Personality Scores and Self Estimates of Adjustments

| | |
|---|---|
| Women Teachers | .10 |
| Women Students | .38 |
| Men | .31 |

Summary Number 24 (93)

a. Reference:
Remmers, H. H. "Reliability and Halo Effect of High School and College Students' Judgments of Their Teachers." *Journal of Applied Psychology*, 18:619–30, October, 1934.

b. Criterion:
Amount of agreement or correlation between the judgments of randomly selected pairs of students in their judgments upon the same trait for the same teacher.

c. Number of persons studied:
57 student teachers were evaluated by high school pupils.
76 college instructors rated by college students.

d. Aspects of teachers or teaching studied:
10 traits of the Purdue Rating Scale.

e. Data-gathering devices:
Purdue Rating Scale for Instructors.

f. Results:

Reliabilities of Judgment

| Traits | Reliabilities of Judgment: High School Teachers (57) | College Teachers (37) | Difference | P.E. of Difference |
|---|---|---|---|---|
| Trait 5—Presentation of subject matter | .26 | .43 | .17 | 5.60 |
| Trait 1—Interest in subject | .21 | .29 | .08 | 2.08 |
| Trait 10—Stimulating intellectual curiosity | .16 | .35 | .20 | 4.61 |

How results were secured:
The average reliability of high school pupils judgment was found by a sampling procedure from the rating sheets of 57 student teachers at the end of their practice teaching period of approximately eleven weeks (54 periods) in the local high schools. From each of the pile of sheets for each of the 57 student teachers, two judges papers were drawn at random, and the judgmental values of each of the three traits in question written down. This yielded 57 pairs of pupils' judgments on each of the three traits. These values for each trait were then entered in a correlation table or scattergram. The sheets were then re-inserted and the piles shuffled for another drawing of two sheets. This process was repeated until twenty correlations for each trait had been obtained.

Summary Number 25 (95)

a. Reference:
Rinsland, Martha A. O. "A Test for Measuring Teachers' Knowledge of the Conduct and Personality of Children From Six to Eight Years of Age." *Journal of Experimental Education*, 6:307–17, March, 1938.

b. Criterion:
Teachers knowledge of the conduct and personality of children.
Years of teaching experience. Years of teaching children from 6 to 8 years of age.
Number of years of college training. No. of courses in child psychology, child welfare, family relations, and parent education.
Number of courses in general educational psychology.
Number of courses in general education.

c. Number of persons studied:
252 teachers of children from 6 to 8 years of age.

d. Aspects of teachers or teaching studied:
Knowledge of the conduct and personality of children.

e. Data-gathering devices:
A test for measuring teachers' knowledge of the conduct and personality of children from six to eight years of age. (Name not given)

f. Results:
The test was found to have high discrimination, high curricular validity, and high reliability.

Summary Number 26 (99a)

a. Reference:
Ryans, David G. "The Professional Examination of Teaching Candidates: A Report of the First Annual Administration of the National Teacher Examination." *School and Society*, 52:273–84, October 5, 1940.

b. Criterion:
No external criterion.

c. Number of cases:
3,726.

d. Qualities studied:
1. Reasoning.
2. English Comprehension.
3. English Expression.
4. General Culture.
5. Professional Information:
   Elementary.
   Secondary.
6. Contemporary Affairs.
7. English Language and Literature.
8. Social Studies.
9. Mathematics.
10. Physical Science.
11. Biological.
12. Languages—French, German, Spanish, Latin.

e. Data-gathering devices:
National Teacher Examination.

TABLE VI—Continued

f. Results:

Mean Score Values of Individuals Classified by Years of Experience

| Years of Experience | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Total Common Booklets | 628.47 | 626.92 | 626.29 | 611.86 | 616.14 | 627.70 |
| Number of Cases | 282 | 85 | 51 | 37 | 43 | 27 |

| Years of Experience | 6–9 | 10–14 | 15–19 | 20 and over |
|---|---|---|---|---|
| Total Common Booklets | 641.35 | 615.35 | 631.76 | 619.93 |
| Number of Cases | 55 | 49 | 25 | 14 |

Summary Number 27 (99b)

a. Reference:
Ryans, David G. "The 1941 Administration of the National Teacher Examinations." *School and Society*, 54:361–68, October 25, 1941.

b. Criterion:
Number of years teaching experience; and degrees held.

c. Number of persons studied:
4,718 candidates were examined.

d. Aspects of teachers or teaching studied:
Reasoning ability; understanding and use of the English language; general cultural information; understanding of professional points of view and teaching methods; knowledge of contemporary affairs; and mastery of the particular subject matter.

e. Data-gathering devices:
1941 National Teacher Examinations, Cooperative Test Service, New York, N. Y.

f. Results:

1. The scores of the 1941 candidates were quite similar to those of the 1940 group.
2. The average scores on the Common Examinations of groups of candidates classified by "first teaching preference" show considerable variation from group to group.
3. Candidates with extended teaching experience did slightly better than candidates with lesser amounts of experience.
4. The commonly found sex differences in test scores were observed with regard to high school teachers, but higher average scores on all tests were shown by the men in the group interested in elementary teaching.
5. Candidates holding higher degrees showed slight advantages on the tests over candidates with lesser training.
6. Examinees who were available for employment but were unemployed at the time of the examination did not differ materially in test scores from those who were employed.
7. Candidates who took the examinations in 1940 and repeated them in 1941 showed slight gains in score, the gains being more pronounced for candidates with higher original scores; the two forms of the examinations given one year apart showed a reliability coefficient of 0.95.
8. Intercorrelations between the test scores in the 1941 battery indicate that while three common factors are probably involved (verbal ability, non-verbal reasoning ability, and awareness of social problems and contemporary affairs), each examination contributes uniquely to the pattern of the candidate's ability and cultural achievement.

Summary Number 28 (101)

a. Reference:
Seagoe, M. V. "Permanence of Interest in Teaching." *Journal of Educational Research*, 38:678–84, May, 1945.

b. Criterion:
Continuance in the profession.

c. Number of persons studied:
74 college students and graduates.

d. Aspects of teachers or teaching studied:
Intelligence, mechanical ability, art judgment, music aptitude, general culture, personality, emotional maturity, adjustment, temperament, interest, values, social attitudes, leadership, teaching aptitude.

e. Data-gathering devices:
American Council Psychological Examination, MacQuarrie Test for Mechanical Ability, Meier Art Judgment Test, Seashore Test of Musical Talent, Cooperative General Culture Test, Thurstone Personality Schedule, Willoughby Emotional Maturity Scale, Bell Adjustment Inventory, Humm–Wadsworth Temperament Scale, Bernreuter Personality Inventory, Strong Vocational Interest Blank, Humm–Wadsworth Qualitative Estimates, Strong Vocational Interest Blank, Vernon–Allport Study of Values, Harper Test of Social Attitudes, Morris Trait Index L., Coxe–Orleans Teaching Prognosis Test, George Washington University Teaching Aptitude Test, Stanford Educational Aptitudes Test.

f. Results:
The analysis of differences between students who remained in training and those who left during the period 1941–1943 shows no statistically significant difference between the two groups.

Summary Number 29 (110)

a. Reference:
Shuey, Audrey M. "The Reliability of the Wilke Personality Rating Scale." *Journal of Educational Psychology*, 34:373–77, September, 1943.

b. Criterion:
No outside criteria.

c. Number of persons studied:
182 persons preparing to teach.

d. Aspects of teachers or teaching studied:
Refinement, appearance, poise, tact, general disposition, personal attractiveness, conscientiousness, promptness, honesty and reliability. Attitude toward others: aggressive, timid.

e. Data-gathering devices:
Wilke Personality Rating Scale.

TABLE VI—Continued

f. Results:

Average Scores, Standard Deviations, and Coefficients of Reliability, Alienation, and Dependability of Faculty Ratings on One Hundred Eighty-Two Students

| | Traits* | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Average Scores | 52.16 | 53.30 | 49.51 | 49.46 | 50.92 |
| SD's | 8.49 | 8.79 | 8.64 | 8.85 | 8.88 |
| $r_{\frac{1}{2}\frac{1}{2}}$ (two halves) | 0.67 | 0.57 | 0.63 | 0.64 | 0.70 |
| $r_{11}$ (reliability) | 0.80 | 0.73 | 0.77 | 0.78 | 0.82 |
| $PE_{r_{11}}$ | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| K (1-r) | 0.60 | 0.68 | 0.63 | 0.62 | 0.57 |
| Efficiency | 0.40 | 0.32 | 0.37 | 0.38 | 0.43 |

*Trait names:
1. Personal attractiveness
2. Reliability
3. Attitude toward others
4. Alertness
5. As a prospective teacher

Summary Number 30 (111)

a. Reference:

Simon, D. L. "Personal Reasons for the Dismissal of Teachers in Smaller Schools." *Journal of Educational Research*, 29:585–88, April, 1936.

b. Criterion:

Dismissal from position.

c. Number of persons studied:

Seventeen-hundred-sixty-nine teachers and administrators.

d. Aspects of teachers or teaching studied:

Discipline, cooperation, personality, morality, adaptability, interest in opposite sex, tactfulness, antagonized employer, popularity with pupils, failure to pay financial obligations.

e. Data-gathering devices:

Records of action taken.

f. Results:

Frequency of Reasons for the Dismissal of Administrators and Teachers in Smaller Secondary Schools, Top Ten Groups

| Reasons (in rank order) | Number of staff members | | | |
|---|---|---|---|---|
| | Administrators | Teachers M | Teachers F | Teachers All |
| Weakness in discipline | 23 | 32 | 50 | 105 |
| Lack of cooperation | 1 | 7 | 21 | 29 |
| Lack of personality | 1 | 4 | 13 | 18 |
| Immorality | 2 | 7 | 5 | 14 |
| Lack of adaptation | 5 | 5 | 4 | 14 |
| Too much attention to the opposite sex | 1 | 4 | 9 | 14 |
| Untactful | 3 | 6 | 4 | 13 |
| In difficulty with employers | 4 | 3 | 5 | 12 |
| Unpopular with pupils | 2 | 5 | 4 | 11 |
| Failure to pay financial obligations | 5 | 5 | ... | 10 |
| Total number of dismissals for all reasons | 47 | 78 | 115 | 240 |

Summary Number 31 (116)

a. Reference:

Spears, Harold. "What Disturbs the Beginning Teachers?" *School Review*, 53:458–63, October, 1945.

b. Criterion:

Student's opinions.

c. Number of persons studied:

Sixty-eight seniors responded to questionnaire.

d. Aspects of teachers or teaching studied:

Attitudes toward teaching.

e. Data-gathering devices:

Questionnaire treating with the seniors' student-teaching experiences.

f. Results:

Disturbances of the Beginning Teacher

| Response | Number giving response |
|---|---|
| Disturbed about low salaries | 32 |
| Disturbed about unprofessional associates | 23 |
| Expressed alarm at the rigidity of the high school curriculum | 23 |
| Total number of students responding to questionnaire | 62 |

Summary Number 32 (118)

a. Reference:

Stump, Noah F. "A Comparative Study of Two Teaching Aptitude Tests." *Journal of Educational Psychology*, 28:595–600, November, 1937.

b. Criterion:

Comparative study—no outside criterion.

c. Number of persons studied:

98 college students.

d. Aspects of teachers or teaching studied:

Teaching aptitude.

e. Data-gathering devices:

Morris Trait Index L., George Washington Teaching Aptitude Test.

f. Results:

Correlational Data

| Morris Trait Index L | | George Washington Teaching Aptitude Test | r |
|---|---|---|---|
| 1. Social attitudes score (Section VI) | with | Total score | .54 |
| 2. Total score | with | Total score | .55 |
| 3. Social attitude test (Section VI) | with | Comprehension and retention (Section III) | .34 |
| 4. Total score | with | Reasoning and information on school problems, (Section II) | .32 |
| 5. Social feelings (Section III) | with | Total score | .32 |

TABLE VI—Continued

Summary Number 33 (119)

a. Reference:
Symonds, Percival M. "Problems Faced by Teachers." *Journal of Educational Research*, 35: 1–15, September, 1941.

b. Criterion:
Stated problems of the teacher.

c. Number of persons studied:
Ninety-eight teachers enrolled in a summer school class.

d. Aspects of teachers or teaching studied:
Adjustment.

e. Data-gathering devices:
Teachers were told to write 5 to 10 or more pages on "Present Problems." Make this a personal document in which you discuss the problems which you met personally during the past year and what you were able to do about them. If possible insofar as the problem in part represents your own personal limitations, attempt to trace your difficulty back to specific experiences or the general situation of your childhood. (A list of a dozen different groupings of problems were given as a possible suggestion.)

f. Results:

The Problems with the Ten Highest Frequencies

| Problem | Frequency |
|---|---|
| Family relationships | 48 |
| Love life | 37 |
| Feelings of inadequacy and inferiority | 36 |
| Health | 26 |
| Difficulties with teaching | 23 |
| Financial problem | 22 |
| Difficulty in making social contacts—introverted | 21 |
| Difficulties with superior officers | 18 |
| Problems relating to position | 12 |
| Aggressive tendencies | 12 |

Summary Number 34 (120)

a. Reference:
Symonds, Percival M. "How Teachers Solve Personal Problems." *Journal of Educational Research*, 38:641–52, May, 1945.

b. Criterion:
Self evaluation.

c. Number of persons studied:
Sixty-five teachers.

d. Aspects of teachers or teaching studied:
Personal problems.

e. Data-gathering devices:
Paper of from five to ten pages telling how you successfully solved some personal problem which you have faced.

f. Results:

Problems Whose Solutions Were Described

| | Frequency |
|---|---|
| Feelings of inadequacy and inferiority | 30 |
| Professional | 12 |
| Family relationships | 11 |
| Personality and emotional problems | 10 |
| Physical | 7 |
| Vocational | 7 |
| Love and marriage | 5 |
| Tired, cross, nervous, tense | 4 |
| Sensitivity over color (Negro) | 4 |
| Physical handicap | 3 |
| Social relationships | 3 |

Methods of Meeting Personal Problems

| | Frequency |
|---|---|
| Securing independence and freedom | 25 |
| Self-improvement | 15 |
| Self-study and insight | 14 |
| Making a decision | 11 |
| Working hard—keeping busy | 11 |
| Discussion with friendly family counselor | 8 |
| Study other people | 7 |
| Planning | 7 |
| Identification | 6 |
| Success—achievement | 6 |
| Submitting, accepting | 6 |
| Sublimation—hobbies, reading, service, interests | 5 |
| New interests | 5 |
| Carrying out decisions | 4 |
| Faith | 4 |
| Friendship | 4 |
| Joining a club, group | 4 |
| Self-confidence, self-respect | 4 |
| Facing facts objectively | 4 |

Summary Number 35 (125)

a. Reference:
Traxler, Arthur E. "Are Students in Teachers College Greatly Inferior in Ability?" *School and Society*, 63:105–107, February 16, 1946.

b. Criterion:
Intelligence test.

c. Number of persons studied:
No specific number given. Freshmen in Teacher Colleges, Junior Colleges, and Four Year Colleges.

d. Aspects of teachers or teaching studied:
Intelligence.

e. Data-gathering devices:
American Council on Education Psychological Examination.

f. Results:

Comparison of Average Raw Scores Made on American Council on Education Psychological Examination by Freshmen in Teachers Colleges, Junior Colleges, and Four Year Colleges During a Ten Year Period, 1935–1944

| Year | Teachers Colleges | Junior Colleges | Four Year | Supv. of Je. | |
|---|---|---|---|---|---|
| 1935 | 169.63 | 168.09 | 187.72 | −1.54 | 18.09 |
| 1936 | 161.74 | 163.38 | 176.89 | 1.64 | 15.15 |
| 1937 | 151.22 | 149.06 | 170.21 | −2.16 | 18.99 |
| 1938 | 80.22 | 82.82 | 92.04 | 2.60 | 11.82 |
| 1939 | 88.70 | 88.11 | 97.46 | −0.59 | 8.76 |
| 1940 | 96.33 | 96.66 | 105.82 | 0.33 | 9.49 |
| 1941 | 97.51 | 98.40 | 106.45 | 0.89 | 8.94 |
| 1942 | 96.13 | 96.80 | 103.63 | 0.67 | 7.50 |
| 1943 | 92.83 | 101.80 | 107.24 | 8.97 | 14.41 |
| 1944 | 101.26 | 99.76 | 106.44 | −1.50 | 5.18 |

The average college freshman in Teachers Colleges is consistently and significantly lower than the average among freshmen in Four Year Colleges and is about equal to Junior Colleges.

The difference in averages, however, is fairly small in absolute terms, and there is great overlapping in the distributions.

TABLE VI—Continued

Summary Number 35a (125a)

a. Reference:
Troyer, Maurice E. "The Selection of Students for the Profession of Teaching." *Journal of Educational Research*, 33:581–93, April, 1940.

b. Criterion:
Norms of achievement.

c. Number of persons studied:
638 college students.

d. Aspects of teachers or teaching studied:
Intellectual capacity.
Academic achievement.
Health.
Emotional stability.
Personality.

e. Data-gathering devices:
Personal data card.
Grades.
Medical examination.
Cooperative Tests in English Usage.
Cooperative Tests of Contemporary Affair.
Ohio College Association Psychological Examination.
Speech test.
Physical examination.
Individual interviews.

f. Results:
Through the selective system students admitted to preparation for teaching were markedly superior to other students attending Syracuse and other liberal arts colleges.

Summary Number 36 (135)

a. Reference:
Wood, Ben D. "Scores on National Committee Teacher Examinations, 1940 and 1941." *School and Society*, 54:625–27, December 27, 1941.

Correlations Between 1940 and 1941 Scores of Same 263 People

| | |
|---|---|
| Total Test | .96 |
| **Sub-Tests** | |
| Reasoning | .79 |
| English Expression | .80 |
| English Comprehension | .89 |
| Contemporary Affairs | .84 |
| Professional Information | .88 |
| General Culture: | |
| Current Social Problems | .83 |
| History, Social Studies | .85 |
| Literature | .90 |
| Fine Arts | .87 |
| Mathematics | .87 |
| Natural Sciences | .79 |
| Total General Culture | .94 |

b. Criterion:
Performance on National Teachers Examination, 1940.

c. Number of persons studied:
263 examinees.

d. Aspects of teachers or teaching studied:
Performance on National Teachers Examination, 1941.

e. Data-gathering devices:
National Committee Teachers Examinations, 1940–1941.

f. Results:
Relationship found:

Summary Number 37 (136)

a. Reference:
Wrightstone, J. Wayne. "Measuring Teacher Conduct of Class Discussion." *Elementary School Journal*, 24:454–460, February, 1934.

b. Criterion:
Tabulation of specific classroom teacher activities as recorded by classroom observers.

c. Number of persons studied:
Twelve social studies classroom situations in elementary schools of one school system, Grades I to VI. Two schools. Average of 35 pupils per class.

d. Aspects of teachers or teaching studied:
Behavior categories in teacher-pupil response situations.

e. Data-gathering devices:
*Controlled observation technique*—a code was devised to enable observers to objectively and easily identify and record the frequency of various specific activities. The code was prepared and the observers were trained by the author.

f. Results:

Percentage Frequencies with Which Items Comprising Code Measuring Teaching Conduct of Class Discussions Occurred in Elementary-School Classes in Social Studies

| Behavior Categories | Percentage in School A in Grade | | | | | | Percentage in School B in Grade | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | V | VI |
| Pupils' voluntary contributions | 1 | 2 | 5 | 3 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| Encourage contribution | 8 | 13 | 4 | 5 | 8 | 4 | 5 | 4 | 2 | 4 | 9 | 3 |
| Propose thesis | 66 | 60 | 46 | 70 | 72 | 69 | 68 | 62 | 72 | 62 | 54 | 67 |
| Refer to sources | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Suggest means | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| Discourage contribution | 3 | 5 | 4 | 3 | 5 | 9 | 4 | 6 | 2 | 7 | 4 | 1 |
| Recall attention | 4 | 3 | 0 | 1 | 0 | 0 | 3 | 6 | 6 | 2 | 0 | 0 |
| Assign task | 12 | 2 | 4 | 2 | 5 | 4 | 4 | 7 | 3 | 3 | 3 | 0 |
| &question and answer | 1 | 15 | 37 | 16 | 8 | 13 | 15 | 13 | 14 | 21 | 29 | 28 |

Summary Number 38 (137)

a. Reference:
Yeager, Tressa C. *An Analysis of Certain Traits of Selected High School Seniors Interested in Teaching.* Contributions to Education, No. 660. New York: Teachers College, Columbia University, 1935, 87 pp.

b. Criterion:
High school seniors interested in teaching.

c. Number of persons studied:
Two-hundred-sixty-nine boys; two-hundred-thirty-one girls.

TABLE VI—Continued

d. Aspects of teachers or teaching studied:
See column number six.

e. Data-gathering devices:
Socio-economic scale questionnaire; Standardized Intelligence Test, Otis Self Administering Higher Examination; grade averages; activity participation rating scale, author constructed; Bernreuter Personality and Adjustment Scale; Yeager Attitude Scale Towards Teachers and the Teaching Profession.

f. Results:

Differences Between the Group Interested in Teaching and Those Not Choosing Teaching

| | Teaching Group | General Group | Critical Ratio |
|---|---|---|---|
| Soc. Econ. Status | 2.3 = 1.07 | 2.24 = .93 | .55 |
| Intelligence (I.Q.) | 111. = 10.21 | 110. = 11.35 | .90 |
| Scholarship | 2.33 = .69 | 2.16 = .62 | 2.43 |
| Leadership | 39.91 4.114 | 22.56 = 2.618 | 4.22 |
| Attitude Scale* | 4.00 = .83 | 4.67 = .88 | 7.56 |

*The lower the score, the more favorable the attitude.

| Bernreuter | Number | Mean | S.D. | Median | Q | Difference in Means |
|---|---|---|---|---|---|---|
| Emotional Stability | | | | | | |
| Boys | 44 | 50.40 | 27.10 | 40.40 | 22.50 | .40 |
| Girls | 65 | 55.50 | 25.40 | 56.80 | 20.50 | 4.50 |
| Self Sufficiency | | | | | | |
| Boys | 44 | 50.30 | 28.40 | 52.00 | 26.20 | —.70 |
| Girls | 65 | 53.20 | 27.00 | 54.10 | 22.90 | 3.30 |
| Dominance Submission | | | | | | |
| Boys | 44 | 54.60 | 26.90 | 57.80 | 20.60 | 6.60 |
| Girls | 65 | 55.10 | 27.70 | 58.70 | 22.80 | 8.10 |

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